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ABSTRACT

This booklet summarizes forty-two Initial Teaching Alphabet (i.t.a.) research reports, highlighting the major features of each study. With minor variation, usually resulting from an absence of complete information, each abstract indicates the number and type of students involved, their grade level, and how they were assigned to experimental or control groups. The reading materials used by each of the groups, the comparability and specific training of teachers, as well as how they were assigned to classes are cited where possible. This information is followed by a list of the evaluation instruments used, the duration of the study, and the percentage of students who made the transition to traditional orthography at the time they were tested. In each abstract, results are summarized with references to the administration of instruments or final observations based on the children's ability to read in traditional orthography. (WR)

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report

Special Issue

i.t.a. Research Abstracts

Forty-Two studies of the effectiveness of i.t.a. abstracted in systematic form.

The Initial Teaching Alphabet Foundation
at Hofstra University
Hempstead, N. Y. 11550

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i.t.a. RESEARCH ABSTRACTS -

J.R. Block, Executive Director
i.t.a. Foundation

Introduction: In an effort to summarize the i.t.a. research results, the i.t.a. Foundation regularly abstracts all available i.t.a. studies using control groups. We have attempted to follow a standard format, highlighting the major features of the study. Obviously, in abstracting, one selects what he considers important and relevant. In an attempt to compensate partially for possible bias, we have listed complete references in each case. When the study has been reported in more than one place, all citations are presented.

With minor variation, usually resulting from an absence of complete information, each abstract indicates the number and type of students involved, their grade level, and how they were assigned to experimental or control groups. The reading materials used by each of the groups, the comparability and specific training of teachers, as well as how they were assigned to classes, are cited where possible. This information is followed by a list of the evaluation instruments used, the duration of the study and the percentage of students who made the transition to T.O. at the time they were tested.

In each case, results are summarized. Where the statement is made that the difference between the groups was significant, it assumes a difference beyond what one would expect on the basis of chance at the five percent level of confidence. In keeping with the observations made in the critique of research presented in the winter 1966 issue of the Foundation Report, both statistical evidence and the subjective observations of the principal investigator are cited. The decision to include both kinds of evidence is based not only on the limitations of conventional reading measures, but on the recognition that there is more than one kind of evidence which may or may not be acceptable to different readers. Obviously, each reader must make his own decision as to which kinds of evidence he finds acceptable and persuasive. In almost every case, the authors have indicated that the lengthnof time devoted to reading instruction and teaching procedures used in experimental and control groups were as comparable as local situation conditions permitted. In certain studies, elaborate records of length of time spent in various tasks were kept. Where this data indicates a lack of comparability between the groups, it is cited.

In each abstract, results cited refer to the administration of instruments or final observations based on the children's *ability to read in T.O.* That is, when instruments were administered to the i.t.a. group, using tasts transliterated into i.t.a., the results are *not* cited in these abstracts. When this is done, i.t.a. children almost invariably score higher than the control group tested in T.O. In the great majority of cases, a large percentage of the i.t.a. group had *not* made the transition at the time the evaluation was made. This percentage ranged from *17%* to almost *100%* although in many studies no data was provided. Most one-year studies apparently find that somewhere between 25-50% of the students have *not* completed the transition although this seems to depend upon a variety of characteristics of the students and the situation. Even when investigators report the percentage of children who have made the transition, they seldom define the term "transition." Usually, the definition implied is that children in the i.t.a. group had completed reading the books in a particular series. In no study, was data presented concerning the amount of time elapsed between completing the series and taking the test, or the amount of experience children had in reading T.O. as of the time the T.O. tests were administered.

These abstracts were collected and reprinted from issues of the i.t.a. Foundation report, many of which are now out of print. They represent the complete series to date. The i.t.a. Foundation Report regularly abstracts new studies as they are published. Anyone aware of studies not already cited are urged to bring them to the attention of the Foundation.

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***REFERENCES**: Alden, C.E., and Manning, R. The use of the initial teaching alphabet in reading instruction - a report on the pilot study conducted at Broadway School during the school year, 1964-1965. Unpublished manuscript, Maple Heights, Ohio, 1965.*

***STUDENTS**: The i.t.a. group consisted of 19 first-grade children, while the control group had 21. Both classes were in the same school. They were heterogeneously grouped and comparable in I.Q.

***MATERIALS USED**: Not indicated in the reference.

***TEACHERS**: The i.t.a. class teacher had somewhat less experience in teaching than the teacher of the T.O. control group. The i.t.a. teacher attended a three-day training workshop.

***EVALUATION INSTRUMENTS**: The Stanford Reading Achievement Test and the Stroud-Hieronymous Test of Reading Achievement.

***DURATION OF THE STUDY**: The Stanford Achievement Test was administered in early June, the Stroud-Hieronymous Test in late May of the academic year. The final sample sizes cited above resulted from the fact that 7 children in the original experimental group had not made the transition at the time of testing. As a result, they were not included in the study. In order to deal with this problem, the 7 lowest children in the T.O. control group were not included in the study.

***RESULTS**: The i.t.a. group scored significantly higher on the Word Reading Paragraph Meaning and Word Study sub-tests of the Stanford Reading Achievement Test as well as the Composite Score. The comparison of one Stroud-Hieronymous Test of Reading Achievement was made both with the 500 pupils taught in T.O. throughout the school system and with data from previous years indicating the level achieved on this test by T.O. children at the school at which the study was conducted. When compared with the system-wide population, the i.t.a. class scored higher but not significantly so, on the Stroud-Hieronymous test. In comparison with the 1964 and 1963 results from the same school, the i.t.a. class achieved significantly higher scores.

REFERENCE: Alpert, H., Tanyzer, H.J., & Sandel, Lenore. The effect of i.t.a. and T.O. when beginning reading instruction in kindergarten. In J.R. Block (Ed.), i.t.a. as a language arts medium. Hempstead, N.Y.: i.t.a. Foundation, 1968.

***PURPOSE**: A comparison of the effectiveness of beginning formal reading instruction in i.t.a. and T.O. in kindergarten versus first grade.

***STUDENTS**: Children in kindergarten and first-grade classes in eleven different school districts in Nassau County, Long Island participated in the study. Initially, a total of over 1300 students were involved. Final data was presented for 410 children who began reading instruction in i.t.a. in kindergarten, with 332 in a control group beginning their reading instruction with traditional orthography. A total of 298 children began their formal reading instruction in i.t.a. in first grade, with a control group of 248 who began formal reading instruction with traditional orthography.

***MATERIALS USED**: The children in the i.t.a. classes used the *Early-to-Read* Series (i/t/a Publications, Inc.), supplemented by library books from Great Britain and the United States. T.O. children used a variety of approved methods of teaching reading consistent with what had typically been the practice in the local school district.

***TEACHERS**: All teachers volunteered for the study, but did not know whether they would be assigned to i.t.a. or T.O. groups. Assignment to each of the classes was accomplished randomly. There was no significant difference between i.t.a. and T.O. teachers in terms of number of years of experience, level of training, or principal evaluation of competence. All teachers attended a three-day workshop in which approved methods for teaching reading in i.t.a. and T.O. were discussed. Kindergarten teachers were instructed to follow the usual readiness practices from September 1964 to January 1965.

***EVALUATION INSTRUMENT**: The Stanford Achievement Test Primary I.

***DURATION OF THE STUDY**: The study involved approximately 1½ years of formal reading instruction for children beginning instruction in kindergarten and 1 year of formal reading instruction for those beginning in first grade. All data was collected at the end of the first grade regardless of the point at which formal reading instruction began. No data is presented with regard to percentage of students who had completed transition at this time.

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RESULTS: All data was presented using the classroom as the unit of observation. This tends to be a statistically conservative approach to significance testing since the number of subjects is reduced from the number of children involved to the number of classrooms involved. When comparisons were made between i.t.a. and T.O. children, the i.t.a. group scored significantly higher than the T. O. control group on the sub-tests of Word Recognition and Word Study Skills. No significant difference between the two groups was found on the sub-test measuring Paragraph Meaning, and the T.O. groups scored significantly higher than the i.t.a. group in Spelling at the end of first grade.

When comparisons were made within the medium of instruction, it was found that there was no significant difference on any of the sub-tests of the Stanford Achievement Test between i.t.a. children beginning their formal reading instruction in kindergarten and those who began their formal reading instruction in first grade. In addition, when similar comparisons were made for the T.O. group, no significant differences were found on the sub-tests of Word Recognition, Word Study Skills, and Spelling between children who began their formal reading instruction in kindergarten versus first grade. However, within the T.O. groups, there was a significant difference favoring children who began reading instruction in first grade as compared with kindergarten on the Paragraph Meaning sub-test.

The authors conclude that there appears to be no significant advantage to beginning reading instruction in kindergarten whether i.t.a. or T.O. is used as the medium of instruction.

REFERENCE: *Bosma, Ruth L. and Farrow, V.L. Teaching reading with i.t.a.: a research report,* ***Reading Horizons,*** *Fall 1965, 6, 1, 6-19.*

STUDENTS: The study included 22 pairs of students matched for sex, age, reading readiness, and I.Q. The i.t.a. group attended the Western Michigan University Campus School while the T.O. control group attended the Kalamazoo Public Schools. The authors report that they have reason to believe that the two schools represent similar socio-economic status levels.

MATERIALS USED: Materials were not specified, although the authors pointed out that they were concerned about "reinforcing the mental and kinesthetic images of word forms and consequently a reinforcement of i.t.a. spellings." As a result, the i.t.a. groups did not receive any instruction in writing until they were to transfer to T.O. On the other hand, the control group was permitted to write as usual. The authors note, "...it should be appreciated that the deletion of writing from the experimental i.t.a. program while allowing writing instruction to remain in the control procedures marked this study as unique among i.t.a. research projects, and also posed a severe and unconventional test of the effectiveness of the i.t.a. medium."

TEACHERS: The authors report that teachers in the two schools were considered comparable in terms of their quality, experience, and professional reputation.

EVALUATION INSTRUMENTS: The Metropolitan Achievement Test.

DURATION OF THE STUDY: The final instrument was administered in May of the school year.

RESULTS: Significant differences in favor of the i.t.a. group were found on the sub-tests of the Metropolitan Achievement Test measuring Word Knowledge, Word Discrimination, and Reading sub-tests. The authors also note that the data suggested "...that instruction with the i/t/a medium was relatively more beneficial for boys in this study."

REFERENCE: *Canfield, R. An experimental study of the effectiveness of the Augmented Roman alphabet (i.t.a.) on the reading development of beginning readers. Unpublished manuscript, State University College at Oswego, New York, 1967.*

STUDENTS: Complete data was available for 105 children at the end of second grade. They attended either the State University College campus school at Oswego or the Minnetto Elementary School in Oswego, N.Y. The schools involved in the study each had an experimental and control group. There were no significant differences between the experimental and control groups on a measure of I.Q. and a Phonic Readiness Test.

MATERIALS USED: The i.t.a.-taught classes used the *Early-to-Read* series (i/t/a Publications). One control group used the *Reading for Meaning* series (Holton-Methlane) while the other was taught via the "Language-Experience method."

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TEACHERS: Teachers in the i.t.a. groups volunteered for the study. Three of the teachers attended a one-week workshop to become familiar with the new alphabet. The author notes, "Because of the lack of randomization of the experimental stimuli, the study should be classified as a quasi-experimental design."

EVALUATION INSTRUMENTS: Evaluation instruments included the Gates Primary Reading Test administered at the end of first grade and the Gates Advanced Reading Test administered at the end of second grade. The Metropolitan Spelling Test was administered in February of the second year of the experiment as well as "...the parts of the SRA Language Perception Test that measure auditory and visual discrimination." In addition, pupils in the campus school were also tested in the oral reading paragraphs of McCracken's Standard Reading Inventory in February of the first grade.

DURATION OF THE STUDY: Data was presented at the conclusion of first and second grades. No data is presented with regard to the percentage of children making the transition to T.O.

RESULTS: Pupils in the two experimental classes scored significantly higher on the Word Recognition, Sentence Reading, and Paragraph Reading sections of both the Gates Primary and the Advanced Reading Test throughout the two-year period. The author notes, "Of additional interest is the increase in the size of mean differences between the experimental and the control groups in the second year of the experiment." With regard to spelling, the author reports that the experimental group spelled an average of 17.8 words correctly on the Metropolitan Spelling Test while the control group spelled 11.6 words correctly. Additional evidence to determine whether or not this difference is statistically significant is not presented. The i.t.a. group scored significantly higher than the control group in the auditory discrimination sub-test of the SRA Language Perception Test. No significant difference was found between groups on the sub-test measuring visual discrimination. No significant difference was found on measures of oral reading.

REFERENCE: ***Chasnoff, R.E. Follow-up on the second grade of an experiment comparing the initial teaching alphabet and the traditional alphabet in first grade reading. Mimeographed paper read at the American Educational Research Association, New York, February, 1967.***

Chasnoff, R. E. Two alphabets. Elementary School Journal, 1967, 67, 257-64.

NOTE: The first reference represents a continuation of the study reported in the second reference.

STUDENTS: Complete data was available for 132 children taught with i.t.a. and 123 taught with T.O. The groups were matched with regard to I.Q. and age and were randomly assigned to classes.

MATERIALS USED: Not indicated in the report.

TEACHERS: According to the author, "Each pair of experimental and control classes was taught by two teachers. One teacher taught reading and related language activities to the experimental class and to the control class. The other teacher taught the other areas of the school program to the two classes. . .the teachers moved between the two rooms. The teachers were instructed to teach both classes using the same time schedules, the same ways of teaching, and, when possible, the same materials."

EVALUATION INSTRUMENTS: Evaluation instruments included the Stanford Achievement Test; the California Reading Test; the Gilmore Oral Reading Test, and a writing sample.

DURATION OF THE STUDY: One form of the Stanford Achievement was administered after 140 days with another form after 160 days of instruction. The California Reading Test was also administered after 160 days of instruction. Writing samples were obtained after 120 days and again after 160 days of instruction. The time of administration for the Gilmore Oral Reading Test is not indicated. The percentage of children making the transition at time of the administration of the dependent variable measures is not indicated.

RESULTS: At the end of 140 days of instruction, the i.t.a. group scored significantly higher than the control group on the Word Study Skills sub-test of the Stanford Achievement Test, but the author reports that, when raw scores were used for the comparison, the difference was not significant. The T.O. group scored significantly higher in Spelling at this time. No significant difference was found between experimental and control group sub-samples of twenty-six pairs of children on the Gilmore Oral Reading Test.

After 160 days of instruction, no significant differences were found on either the Stanford Achievement Test or the California Reading Test in any of the sub-tests. An analysis of the spelling errors of the experimental and control group indicated that there were no significant differences in the most common mispelled words.

Writing samples were rated by judges who considered ten criteria in their ratings although "Judges

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were cautioned not to try to find evidence for all criteria in each sample. Emphasis was to be placed on a quick impression, with the criteria in mind." The author reports a significantly higher rating of writing samples for the i.t.a. group after 120 days of instruction, but no significant difference after 160 days.

REFERENCE: *Clark, G. E., Jr. An adult basic education program. In A. J. Mazurkiewicz (Ed.),* ***i.t.a. and the world of English.*** *Hempstead, N.Y.: i.t.a. Foundation, 1966. Pp 225-229.*

University of Detroit. ***Research Report on Basic Adult Education Program,*** *University of Detroit Center for Continuing Education, Detroit, Michigan. October, 1965.*

STUDENTS: A total of 48 adults with a median age of 44 years participated in the study. All were married, heads of household, and most had 2 adult dependents. Number of children per family ranged from 1 to 12. Eleven of the subjects were white while 37 were Negro. All subjects were receiving public assistance. The measured I.Q. range for the group was from 40 to 88 although the author reports that these are probably under-estimates of the intellectual ability of the sample. Formal education ranged from 0 to 9 years with a median of 6 years. The median reading level was slightly below the 4th grade. Nineteen of the subjects were assigned to i.t.a. training.

MATERIALS USED: The i.t.a. group used the *Early-to-Read* program (i/t/a Publications) as a basic set of materials. This was supplemented by locally transliterated materials. The T.O. control group used the SRA *Reading in High Gear* series supplemented with the *Reader's Digest Adult Series* and the SRA *Laboratory, Elementary Edition,* with additional supplementary materials.

TEACHERS: The author reports that the majority of teachers had had very little formal teaching experience. Teachers in the T.O. group had somewhat more experience than those in the i.t.a. group. Records kept with regard to the amount of formal instruction in reading indicated that there was slightly less formal reading for the i.t.a. group than for the control group.

EVALUATION INSTRUMENTS: The Diagnostic Reading Scales.

DURATION OF THE STUDY: The study was conducted over an 8-week period with approximately 70 hours of instruction in reading. According to the author, almost all of the students had made the transition to T.O. at the end of this time.

RESULTS: Subjects in the i.t.a. group whose pre-test reading scores suggest instructional reading levels between 0 and 4.0 scored significantly higher in Word Recognition and Instructional Level as measured by the Diagnostic Reading Scales than those with a similar reading level who used the T.O. materials. For those scoring above the fourth grade on the initial placement test, the T.O. sample scored significantly higher than the i.t.a. group in Word Recognition and Independent Silent Reading Level at the conclusion of the eight-week period. The author also reports a slightly higher absentee rate in the T. O. class as compared with the i.t.a. group.

REFERENCE: *Downing, J. A.* ***The initial teaching alphabet reading experiment.*** *New York: Scott, Foresman & Co., 1965.*

SUBJECTS: A total of 2500 four and five-year old children in Great Britain. The i.t.a. and T.O. groups were found to be non-significantly different in age, sex, social class and I.Q.

MATERIALS USED: The *Janet and John Readers* (James Nisbet & Co., Ltd.) were used for both groups. The i.t.a. group used a transliterated edition prepared by pasting the i.t.a. text over the T.O. text.

TEACHERS: Teachers attended a special two-day training workshop in the use of i.t.a. The author reports teachers were encouraged to conduct their classes along usual lines varying their methods only as the developments in the children demanded it. Teachers in the control schools "have been provided with refresher courses and . . .attend regular meetings to discuss the reading research, in order to match the Hawthorne effect which may be generated in the training and research meetings of the i.t.a. teachers."

EVALUATION INSTRUMENT: The major evaluative instrument administered to both groups in T.O. was the Neale Analysis of Reading Ability test.

DURATION OF THE STUDY: The study formally began in September of 1961. In March of 1963 slightly less than 50% of the group had completed the transition. (It should be remembered that the children in this study are considerably younger than in most i.t.a. studies in America.)

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RESULTS: The i.t.a. group scored significantly higher on the Accuracy and Comprehension sub-tests of the Neale Analysis of Reading Ability scale. There was no significant difference in the speed of reading between the two groups.

In addition to these results, the author cites the subjective evaluations of 19 headteachers whose schools were involved in this study. Their observations suggested that: "Learning to read i.t.a. raises the young beginner's level of self-confidence"; "Greater enthusiasm for reading and more interest in books in the i.t.a. classes"; and "Creative writing significantly improved in i.t.a. classes."

REFERENCE: *Downing, J.A. and Jones, Barbara. Some problems of evaluating i.t.a., a second experiment.* ***Educational Research,*** *February 1966. Pp. 100-114.*

STUDENTS: Approximately 1100 students between four and five years old in Great Britain randomly assigned to an i.t.a. or T.O. control group, with an approximately equal number in each. Thirteen schools were involved, with each having one i.t.a. and one T.O. class. i.t.a. and T.O. control groups were found to be significantly different in sex, age, social class, I.Q. or vocabulary level.

MATERIALS USED: Both groups used the *Janet and John* reading series (James Nisbet and Co. Ltd.). The i.t.a. groups used a transliterated version.

TEACHERS: In this study, teachers worked in teams within each school. The purpose of the design was to have teachers spend one-half of their time with the i.t.a. group and one-half with the T.O. control group. Records were kept as to the amount of time spent in each group. Where this proportion was greater than 60% with one of the groups, classes were dropped from further research analysis. The authors report that there was a tendency for teachers to spend more time with the i.t.a. group. In a further effort to control for variables such as the Hawthorne effect, few visitors were permitted to the classrooms. Where there were visitors, an effort was made to keep the number equal in both groups. As an additional precaution, an equivalent number of parent-teacher meetings was held for both groups.

EVALUATION INSTRUMENT: The primary evaluation instrument in T.O. was the Neale Analysis of Reading Ability.

DURATION OF THE STUDY: The study began in September, 1963 and data is reported as of March, 1965. (Once again the reader is reminded that children in this study are much younger than those used in the majority of studies reported in this series of abstracts.) The author notes that while the evaluation instrument was presented in T.O. to both groups " . . . this measure is clearly premature because one month before the test was given only 17% of the experimental group had been transferred by their teachers to T.O. reading materials, but *the whole* (author's emphasis) of the i.t.a. group was tested *in* T.O. (author's emphasis)."

RESULTS: No significant differences were found between the i.t.a. and T.O. control groups on the Accuracy, Comprehension or Reading Rate sub-tests of the evaluation instrument.

REFERENCE: *Dunn, L.M., Mueller, M.W., & Neely, M.D. An interim report of the efficacy of the initial teaching alphabet and the Peabody Language Development Kit with grade one disadvantaged children. In A.J. Mazurkiewicz (Ed.),* ***i.t.a. and the world of English.*** Hempstead, N.Y.: i.t.a. Foundation, 1966. Pp. 91-100.

STUDENTS: The subjects for this study were 369 first grade culturally disadvantaged children. The mean I.Q. for the group as measured by the Stanford-Binet was 84.9.

MATERIALS USED: The i.t.a. group used the *Early-to-Read* series (i/t/a Publications, Inc.). The T.O. materials are not identified. A total of three experimental groups and one control group was used. One experimental group used i.t.a. in conjunction with the Peabody Language Development Kit (PLDK). Another group used i.t.a. without the PLDK. A third experimental group used the PLDK without i.t.a. The control group uses *neither* i.t.a. nor the PLDK.

TEACHERS: Teachers in the experimental groups were provided with a small supplementary stipend and were asked to attend in-service training sessions during the year. The authors report that in general there seemed to be more opportunity for support for the experimental group teachers than the control group. They comment, therefore, that as a result, the influence of the Hawthorne effect cannot be ruled out. The authors also point out that since there were three experimental groups, one may wish to consider the fact

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that the Hawthorne variable acted approximately equally in each. They suggest therefore that comparisons between experimental groups may be made with greater confidence of freedom from influence of the Hawthorne effect than comparisons between experimental and control groups.

EVALUATION INSTRUMENTS: The Metropolitan School Achievement Test, the Illinois Test of Psycho-Linguistic Abilities, The Peabody Picture Vocabulary Test, and the Peabody Language Production Inventory. The Metropolitan Achievement Test was administered in both i.t.a. and T.O. The results cited here deal only with the T.O. versions.

DURATION OF THE STUDY: Final measures were taken in the spring of the academic year. No indication is available with regard to the number of children who had made the transition from i.t.a. to T.O.

RESULTS: The experimental group using both i.t.a. and PLDK and the "i.t.a. only" group scored significantly higher on the Metropolitan Achievement Test than the other groups. Groups receiving the PLDK either alone or in combination with i.t.a. scored significantly higher than the other two groups (i.e., the i.t.a. only and the control without i.t.a. or PLDK) on the Illinois Test of Psycho-Linguistic Abilities, the Peabody Picture Vocabulary Test, and the Peabody Language Production Inventory.

REFERENCE: *Eichel, A.J. A study of the effect of the initial teaching alphabet on reading achievement. Unpublished doctoral dissertation, New York University, 1966.*

STUDENTS: The i.t.a. group consisted of 55 children with 48 in the control group in the first grade of the Lawrence Public School. One i.t.a. class and one T.O. class in each of two schools were used. Children were randomly assigned to i.t.a. and T.O. classes and were found to be equal in average age and I.Q. reading readiness.

MATERIALS USED: The i.t.a. group used the *Early-to-Read* series (i/t/a Publications, Inc.). One T.O. class used the Ginn reading series, while the other used the *Scott, Foresman Sixties Edition*.

TEACHERS: All teachers volunteered for the study and were matched in terms of length of service, college background and competence as observed in the classroom by three administrators. Before assignment to either an i.t.a. or T.O. class, all teachers attended a three-day workshop during which about one-half the time was devoted to a discussion of i.t.a. and the other half to general problems associated with teaching reading. Supervisors met with teachers an average of once every six weeks to discuss progress. The author notes that the i.t.a. teachers tended to be more hesitant and cautious about the program. He notes, "For example, it was observed that occasionally unnecessary time was spent on some of the work book pages, even though it was evident that the children did not need the additional practice provided by these pages." In an attempt to minimize the Hawthorne effect, the T.O. teachers were permitted to any of the classrooms in the study.

EVALUATION INSTRUMENT: The Metropolitan Reading Test, Primary II.

DURATION OF THE STUDY: The instruments were administered in June at the end of first grade and again in February mid-way through the second grade. At the June administration, it was noted that approximately 73% of the i.t.a. class had made the transition to T.O. By February, all i.t.a. children had completed the transition.

RESULTS: No significant difference was found between the experimental and control groups on the Metropolitan Reading Test sub-scores of Work Knowledge, Word Discrimination or Reading either at the end of first grade or half way through the second grade.

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REFERENCES: *Fry, E. B. First grade reading instruction using diacritical marking system, initial teaching alphabet and basal reading system.* ***The Reading Teacher,*** *May 1966, 19,8, 666-669.*

REFERENCES: *Fry, E.B. First grade reading instruction using diacritical marking system, initial teaching alphabet, and a basal series. New Brunswick, New Jersey: Rutger's University, Office of Education Cooperative Research Project No. 2745,1965.*

Fry, E.B. Comparing the diacritical marking system, i.t.a., and a basal reading series. ***Elementary English, XLIII,*** *October 1966, 6, 607-611.*

Mountain, Lee H. A comparison of i.t.a., diacritical marking system, and basal reader programs. In A.J. Mazurkiewicz (Ed.), ***i.t.a. and the world of English,*** *Hempstead, N.Y.: i.t.a. Foundation, 1966. Pp. 280-288.*

NOTES: *At the time this abstract was written the final report of the Office of Education study had not been received by the i.t.a. Foundation. As a result this abstract is based on data presented in the other references cited above.*

STUDENTS: The number of students included in the study was not reported in either of the two articles cited above; however, the statement is made that 21 first-grade classes from areas near New Brunswick, New Jersey participated in the experiment. The authors report that no significant differences were observed in the three groups using measures of reading readiness or I.Q. administered at the beginning of the study.

MATERIALS USED: The i.t.a. group used the *Early-to-Read* series (i/t/a Publications, Inc.), the T.O. group used the *Sheldon Readers* (Allyn and Bacon), and the Diacritical Marking system group used the *Sheldon Readers* modified with DMS symbols.

TEACHERS: All teachers volunteered for the study. According to the author, they were randomly assigned to one of the three experimental groups. Despite the manner of assignment, the authors report that the teachers in the i.t.a. group had "substantially more teaching experience" than the other two groups, while teachers in the Diacritical Marking System Group were rated "substantially lower in competence" than the other teachers.

EVALUATION INSTRUMENTS: The Stanford Achievement Test provided the basic measure of silent reading. This test was supplemented by the Gilmore Oral Reading Paragraphs, the Fry Phonetically Regular Words Test, The Gates Word Pronounciation Test and the Detroit Word Test and the Detroit Word Reading Test. Each of the latter scales was administered to randomly selected sub-samples.

DURATION OF THE STUDY: The study covered 140 days of instruction. The percentage of children making the transition to T.O. is reported in the *Elementary English* article as 40%.

RESULTS: The authors report no significant differences on the sub-tests of the Stanford Achievement Test with the exception of the Spelling sub-test. When only T.O. spellings were considered acceptable, the i.t.a. group scored significantly lower than the other groups. When the i.t.a. spellings were accepted, there was no significant difference. There were no significant differences on the Detroit Word Recognition Test, the Gilmore Oral Reading Test, or The Gates Word Pronounciation Test. The i.t.a. groups scored significantly higher than either the T.O. or the DMS groups on the Fry Phonetically Regular Words Oral Reading Test.

In terms of writing ability, Fry reports that samples of writing ability were obtained from sub-samples of the population. These were scored according to a "writing mechanics ratio" which the author indicates was a function of "correct usage of punctuation and indentation to the number of times correct usage required." Using this measure of writing, the i.t.a. group scored significantly lower than either of the other two groups. He also reports, however, that the i.t.a. groups wrote significantly longer stories than the other two groups. However, he emphasizes that writing instruction was not controlled in the experimental design.

REFERENCE: *Fry, E. Comparisons of three methods of reading instructions (ITA, DMS, TO). Results at the end of second grade, Interim Report, Project No. 3050, Grant No. OE-10-022, U.S. Department of Health, Education and Welfare, Washington, D. C., December 1966.*

NOTE: This study was a continuation into the second grade of a research project abstracted above.

SUBJECTS: Three hundred forty-seven children in 21 classes in the New Brunswick, New Jersey area were used in this study. In the earlier report, using measures of reading readiness and I.Q. the authors indicated

no significant differences in any of the three groups.

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MATERIALS USED: The i.t.a. group used the *Early-to-Read Series* (i/t/a Publications, Inc.). The T.O. group used the *Sheldon Readers* (Allyn & Bacon), and the Diacritical Marking System group used the *Sheldon Readers* modified with D.M.S. symbols. While the basic report deals with the second year of the study, the author notes that a modified D.M.S. administered to first-grade students was also included. The results for this group were compared with the results at the end of the first year for the other three groups.

TEACHERS: Teachers were rated as approximately equal in competence, age, experience in teaching second grade, number of children, and teacher attendance. The author reports that approximately equal amounts of time for instruction in reading in the language arts was found among all groups.

EVALUATION INSTRUMENTS: The Stanford Achievement Test Primary II provided the basic measure of silent reading. This test was supplemented by the Gilmore Oral Reading Test, the Fry Phonetic Words Test and the Gates Word Pronunciation Test. Each of these latter instruments was administered to randomly selected sub-samples of approximately 40 children in each group. In addition, a writing sample was obtained and a Reading Habits Inventory administered.

DURATION OF THE STUDY: The basic report deals with data obtained at the end of the second year of instruction. The percentage of students completing the transition from i.t.a. to T.O. is not given but is assumed to be close to 100%.

RESULTS: Using the SAT as the criteria of silent reading, no significant differences were found among the various sub-groups with the single exception of the D.M.S. group scoring lower than the other groups on the Word Meaning sub-test. The author reports that at the end of the first grade, the i.t.a. children scored significantly lower in spelling, but at the end of second grade, no significant difference in spelling was observed. No significant difference was found on either the accuracy, or rate sub-tests of the Gilmore Oral Reading Test and there was no significant difference using the Gates Word Pronunciation Test. The i.t.a. group scored significantly higher than the T.O. control on the Fry Phonetic Words Test.

When the writing sample was used as a criterion, the author reports, "...the i.t.a. children wrote significantly longer stories and as a function of this, spelled more words correctly, used more different words, and more longer words." The author notes that writing was not controlled in the study.

There was no significant interaction by either sex or I.Q. The author notes, therefore, that according to his study, "...no method is superior or inferior for bright or dull children or for boys or girls."

The Reading Habits Inventory was compiled by asking teachers to complete forms recording the number of books children had read completely or partially. It also involved a five-point rating scale reflecting the teacher's appraisal of the child's eagerness to read and the maturity of his selection of books. The author reports that there were no significant differences for these measures, but the specific significance test used is not indicated. According to the tables in the Appendix of the report, the number of books read completely ranged from a low of 0 in all cases to a maximum of 18 for the T.O. group; 31 for the D.M.S. group; and 83 for the i.t.a. group. Partially-read books ranged from 0 to 10 for the T.O. group; 0 to 5 for the D.M.S. group; and 0 to 14 for the i.t.a. group. These figures are quoted in this abstract since it seems reasonable that the number of books read completely or partially would presumably be positively skewed.

Comparing students in the first grade who used a modified D.M.S. approach with the first grade results from the previous year for the other groups, the author reports no significant difference between the new D.M.S. group and the others in Word Meaning, Paragraph Meaning, and Word Study Skills. The modified D.M.S. group scored significantly lower on the Vocabulary sub-test while the i.t.a. group at the end of the first grade continued to score significantly lower in spelling. On the measures of oral reading (using the Gilmore Oral Reading Test and the Gates Word Pronunciation Test), no significant difference was found. However, the i.t.a. group and the modified D.M.S. group scored significantly higher than the others on the Fry Phonetic Words Test. The i.t.a. group wrote significantly longer stories than the other groups.

REFERENCE: ***Gardner, K. The initial teaching alphabet (i.t.a.) and remedial reading programme. The Australian Journal on the Education of Backward Children, December 1966, 67-71.***

STUDENTS: One hundred forty children in Great Britain between 7½ and 8½ years of age, whose beginning reading level was reported to be between 1 and 9 words on the Schonell Word Recognition Test, were used in this study of remedial reading with i.t.a. The I.Q. of this group ranged between 80 and 90 on the Wechsler Intelligence Scale for Children. Seventy children were taught with T.O. and 70 with

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i.t.a. The mean beginning level of word recognition was 4 for each group. No other data is presented with regard to the comparability of the groups.

MATERIALS USED: Not indicated in the reference.

TEACHERS: Comparability of the teachers and their training is not indicated in the reference.

EVALUATION INSTRUMENT: The Schonell Word Recognition Test.

DURATION OF THE STUDY: The author cites data with regard to word recognition after 40 hours of remedial teaching (6 months). No data is presented with regard to the percentage of children in the i.t.a. group who have made the transition to T.O. at this time.

RESULTS: The author reported no significant difference in means for the word recognition test score although the i.t.a. group scored higher than the T.O. control group.

(In the article, data is presented int the form of frequency distributions for the two groups of 70 children. In inspecting this data, the i.t.a. Foundation concluded that testing for the significance of differences in means was inappropriate in view of the extreme slowness of the distributions. A more appropriate statistical test would be the Kolmogorov-Smirnov Two-Sample Test. This test is a more conservative one than those usually used for testing for significant differences in means. It makes less rigorous assumptions and is less likely to detect significant differences should they exist. Using the data presented by the author, the i.t.a. Foundation used the Kolmogorov-Smirov Test to see whether the distributions were significantly different from one another. This resulted in a significant difference at the .001 level, with the i.t.a. group scoring significantly higher.)

Gardner also reports that, "...i.t.a. pupils have, on average, 14 months remedial teaching before discharge. Pupils taught in the traditional medium alone average 18 months before discharge." He continues, "When long-term results are considered it transpires that when pupils are retested two years after discharge, 85% of the pupils taught on i.t.a. have continued to make satisfactory progress. 70% of the pupils taught solely in the traditional medium meet the same criterion."

REFERENCE: *Georgiades, N.J. and Downing, J.A.* ***Report on the uses of the initial teaching alphabet in remedial reading courses in primary, secondary, and special schools.*** *London: University of London Institute of Education, 1964.*

The nature of this report prohibits following the general outline used in abstracting the other research reports. The report itself is a series of abstracts of informal studies of the remedial use of i.t.a. in Great Britain. The authors report that these studies were carried out as a result of a high interest level on the part of the persons concerned with the problems of remedial reading in England in 1962. They caution that at the time very little material was available which was especially designed for remedial reading. Thus, it is assumed that the materials used tended to be those designed for beginning readers.

Each of the studies were "...written by teachers, head teachers and others who, while being trained observers of child behavior, for the most part have been untrained in the principles of experimental investigation and who are without any special funds for their experiments." The authors prepared a paper providing guidance to lay persons in the field emphasizing the need to insure that "...as nearly as possible, the same conditions applied to both i.t.a. and T.O. control groups; i.e., the composition of the groups should correspond and ideally, one teacher should teach both groups. The same amount of time should be spent with each group, and the activities during this period (e.g., free access to books and free writing) should be similar." These and other methodological instruction were available to interested institutions. The authors emphasized that in view of the diversity of the schools, and the adverse conditions under which the studies were executed *"the reports are not definitive,* they merely show the trend of the opinion of the workers in the field to this new medium of instruction" (emphasis supplied).

Twenty-three reports are cited in the paper. Of these, twelve attempted to use control groups. In two of these studies, data from the previous years' results were used as controls. In most cases, experimental and control groups tended to be matched as to age, amount of instruction, I.Q., and initial reading age. The number of students in each group was small, ranging from 7 to 21 with a median of approximately 9. In most cases, the final measure represented the average reading age following periods of remedial instruction ranging from approximately 16 weeks to one year. The majority of studies provided 20-30 weeks of remedial instruction.

Of the twelve using control groups, only one indicated significant diffe ence in favor of the i.t.a. group.

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(It should be recalled here that sample sizes are extremely small.) Of the remaining studies, 7 showed the i.t.a. group to score higher but not significantly so than the T.O. control. One study showed the T.O. control to score higher than the i.t.a. group, and three showed identical average reading scores at the conclusion of their respective studies.

In addition to these studies, the report cites eleven additional studies in which control groups were not used. These investigations were based on from 2 to 30 students with a median of approximately 16. Without a control group, comparison in reading performance could not be made.

Teachers from17 primary schools included in the report responded to a questionnaire distributed by the authors. According to the authors, "15 reported the intention to continue using the i.t.a. with remedial groups; 12 noted improvement in attitude toward reading of the children in the i.t.a. group; 9 noted improvement in the experimental group's behavior in school attendance." The authors also note, "There are only four comments which could in any way be considered critical."

REFERENCES: *Hahn, H.T. Three approaches to beginning reading instruction - i.t.a. language arts and basic readers.* ***The Reading Teacher,*** *May 1966, 19, 8, 590-594.*

Hahn, H.T. Three approaches to teaching reading in grade one. In A.J. Mazurkiewicz (Ed.), ***i.t.a. and the world of English,*** *Hempstead, New York: i.t.a. Foundation, 1966. Pp. 268-272.*

Hahn, H.T. ***Relative effectiveness of three methods of teaching reading in grade one.*** *Lansing, Michigan; Michigan Department of Public Instruction, Office of Education, Cooperative Research Project Number 2687, 1965.*

SUBJECTS: The study involved 905 first-grade students in Oakland County, Michigan. Approximately one-third were assigned to each of three experimenal groups. Subjects were grouped homogeneously and matched for socio-economic background and I.Q.

MATERIALS: The i.t.a. group used the *Downing Reading Series* (Initial Teaching Publications) with additional library corner books. The Language Arts Group "...followed with some variations with the Language-Experience model developed in San Diego, California, using T.O." Hahn reports "...books authored by children, first dictated to the teacher, provided the beginning reading material." This was supplemented by *Little Owl Books*. Teachers used *From Speech to Print Phonics* by Murphy and Durrell. Control groups used "...a Basal Reader Series which the teachers had not tried before." This was supplemented by *From Speech to Print Phonics*.

TEACHERS: Teachers were selected by districts on the basis of teaching ability and experience. The average teacher had taught seven years and had some work beyond a bachelor's degree. According to Hahn, all thirty-six teachers were given "equal opportunity for intensive in-service training, were released to share promising practices and to work with visiting consultants, had access to a reading resource person, and received personal recognition for accomplishments in this study." Each teacher was asked to employ a relatively unfamiliar reading program in an effort to partially control for the Hawthorne effect.

EVALUATION INSTRUMENTS: The Stanford Achievement Test and the San Diego County Reading Attitude test. Sub-groups of 55 children from each of the three groups were selected randomly and administered the Gilmore Oral Reading Scale, the Fry Word List, The Gates Word List and the Karlsen Word List.

DURATION OF THE STUDY: Final evaluation took place in May of the school year. At this point, Hahn reports 80% of the i.t.a. class had made the transition to T.O.

RESULTS: Both the i.t.a. and the Language Arts group scored significantly higher than the basal reader series group on the Word Reading sub-test of the Stanford Achievement Test. Further, the Language Arts groups and the basal reader systems scored significantly higher than the i.t.a. group in spelling, but when i.t.a. spellings were accepted there was no significant difference. No significant differences were obtained on Paragraph Meaning, Vocabulary, or Word Study sub-tests, nor were differences observed on the Arithmetic sub-test. In the sub-samples of 55 children, no significant differences were found on the Gilmore scales or on the Karlsen Word List. The i.t.a. children recognized significantly more words on both the Fry and Gates Word lists than the other groups. No significant differences were found with the San Diego Reading Attitude Test.

No statistical analysis was made of writing ability, although the study concludes that both the i.t.a. and the Language Arts groups wrote freely and extensively throughout most of the school year. The author notes, "it appeared that time for writing was more restricted in the basic reader approach, and less writing was evident."

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REFERENCE: *Hahn, H.T. Three approaches to beginning reading instruction-i.t.a. language experience in basic readers-extended to second grade.* ***The Reading Teacher,*** *May 1967, 20, 8, 711-715.*

NOTE: This study was a continuation into the second grade of a research project abstracted above.

STUDENTS: Data is presented for 649 children completing the second grade in twelve school districts in Oakland County, Michigan. Two hundred twenty-one children were in the i.t.a. group, 212 in the Language Experience group, and 216 in the Basic Reader group.

MATERIALS USED: The author reports that during the second year, i.t.a. and Language Experience classes followed similar instructional programs which focused "...on methods for providing pupils with purposeful reading, writing, listening, and speaking activities, integrated to assist them in discovery of the power of self expression." The only specific set materials cited was *An Introduction to Language-Experience Program, Level 2* (Encyclopedia Britannica Press). The curriculum for the Basal Reader children was not identified in the reference.

TEACHERS: The specific character of the teachers in the second grade is not indicated in this reference. The first grade teachers were "...chosen from among those who volunteered for the three approaches, agreed to use new and relatively unfamiliar programs and materials and to participate in the extensive in-service training sessions which were to continue throughout the school year."

EVALUATION INSTRUMENTS: The Stanford Achievement Test, Primary Battery II, was administered to all students. The Gilmore Oral Reading Paragraphs and the Gates Words Lists were administered to sub-groups of approximately 60 students each representing random samples from each classroom. To obtain a writing sample, all children were "...invited to write an ending to a story which was read to them." The specific reference cited presents means and standard deviations of the results of a survey of a number of books read in one month and the San Diego Pupil Attitude Inventory, however, the number of subjects involved is not indicated.

DURATION OF THE STUDY: Data is presented for scores on the dependent variable measures at the end of the second year of instruction. No data is presented with regard to the percentage of children completing the transition to T.O.

RESULTS: No significant differences were obtained between the i.t.a. and Language-Experience groups on any of the sub-tests of the Stanford Achievement Test. The i.t.a. group scored significantly higher than the Basal Reader group at the .05 level on both the Spelling and Word Study sub-tests. The Language Experience group scored significantly higher than the Basal Reader group on the Word Meaning, Paragraph Meaning, and Science and Social Science Concepts at the .01 level and, higher on the Spelling, Word Study, and Language sub-tests at the .05 level. There were no significant differences on either of the arithmetic sub-tests.

No significant differences were found between any of the groups on either Accuracy or Rate sub-tests of the Gilmore Oral Reading Paragraphs. Both the i.t.a. and the Language Experience groups scored significantly higher than the Basal Reader group on the Gates Word Lists, sub-test of the Word Pronunciation. There was no significant difference on this measure between the i.t.a. group and the Language-Experience group.

With regard to number of books read completely in one month, the Language-Experience group scored significantly higher than either the i.t.a. or Basal Reader group while no significant difference was found between the i.t.a. and Basal Reader groups. The Basal Reader group scored significantly higher on the San Diego Pupil Attitude Inventory than the i.t.a. group. There were no significant differences for other group comparisons on this measure. When the writing sample was used, the Language Experience group was found to score higher than both the i.t.a. and Basal Reader groups in terms of number of running words; number of different words; number of words spelled correctly; and, number of polysyllabic words. The Basal Reader group scored higher than either the i.t.a. or Language-Experience group on a "writing mechanics ratio scale."

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REFERENCE: *Hayes, R. B. i.t.a. and three other approaches to reading in first grade.* ***The Reading Teacher,*** *May 1966, 19, 8, 627-630.*

Hayes, R. B. ***Factors affecting learning to read.*** *Harrisburg, Pa.: Pennsylvania Department of Public Instruction, Office of Education Cooperative Research Project No. 2687, 1965.*

Nemeth, J.S. and Hayes, R. B. The New Castle beginning to read study - a preliminary report. In A.J. Mazurkiewicz (Ed.), ***i.t.a. and the world of English,*** *Hempstead, N.Y.: i.t.a. Foundation, 1966. Pp. 259-267.*

STUDENTS A total of 365 first-grade readers were assigned randomly to one of four different reading methods. All children were from the New Castle, Pa. area.

MATERIALS USED The four groups used the following sets of materials. The basic T.O. control group used the Scott, Foresman series; a second T.O. group used the Scott, Foresman readers supplemented with *Phonics and Word Power;* a third T.O. group used the Lippincott Readers (a phonics-oriented appr[illegible]e i.t.a. group used the *Early-to-Read* series (i/t/a Publications, Inc.).

TEACHERS Teachers volunteered for the study and, in general, were assigned to the particular group they indicated as their first choice. Teachers were matched on the Hayes Teacher Rating scale for competency. All teachers received a three-day in-service training program supplemented by equal amounts of training during the period of the study. All received approximately equal attention and assistance in a partial attempt to balance the Hawthorne effect.

EVALUATION INSTRUMENTS The Stanford Achievement Test was administered to the total group. A random sample of 30 students from each group also received the Gilmore Oral Reading Test, the Gates Word Pronounciation Test and the Fry Oral Reading Test.

DURATION OF THE STUDY Final instruments were administered after 140 days of instruction. At this point 74% of the i.t.a. group had made the transition to T.O.

RESULTS Hayes divided his subjects into three I.Q. groups. In the high third, the i.t.a. and Lippincott groups scored significantly higher than the two other groups on both the Fry and Gates Word lists. Further, the i.t.a. group scored significantly higher than other groups on the Gilmore Oral Reading Test. On the Stanford Achievement Test, the Lippincott and i.t.a. means were significantly higher than the other two groups on the sub-tests of Word Reading and Paragraph Meaning and Word Study Skills. The author notes, "No comparisons were made in Spelling for i.t.a. since the conclusions would vary depending on whether or not spelling in i.t.a. was counted as correct."

"For the average I.Q. third, i.t.a. and Lippincott groups usually showed higher silent achievement. The Lippincott and i.t.a. scores were significantly higher than SF and PWP scores on Word Reading and Word Study Skills. On Paragraph Meaning, the Lippincott and i.t.a. scores were significantly higher than the PWP ... the i.t.a. group was usually highest in oral achievement."

"For the low I.Q. third, the i.t.a. score was generally highest in both silent and oral achievement. In Word Reading, the i.t.a. mean was significantly higher than the means for the PWP, SF, and LIPP groups. The i.t.a. group scored significantly higher than the Lippincott in Word Study Skills. On the Fry list, the LIPP and i.t.a. groups had significantly higher means than the SF and PWP. The i.t.a. mean was significantly higher on the Gates list than the PWP mean."

REFERENCE: *Hayes, R. B. and Wuest, R.C.* ***Factors affecting learning to read.*** *Cooperative Research Project No. 5-0572, U.S. Dept. of Health, Education & Welfare, Washington, D. C., December 1966.*

NOTE: This is a report of the second year of a study abstracted and cited above.

STUDENTS Of the initial group of 365 first-grade children randomly assigned to classes in one of four different reading methods, 302 were able to continue for the second year. All children were from the New Castle, Pennsylvania, area.

MATERIALS USED The four groups used the following sets of materials: The basic T.O. control group used the Scott, Foresman series; a second T.O. group used the Scott, Foresman readers supplemented with *Phonics and Word Power;* a third T.O. group used the Lippincott readers (a phonics oriented approach); the i.t.a. group used the *Early-to-Read* series (i/t/a Publications, Inc.). Following transition to T.O., the i.t.a. group continued with the *Treasury of Literature Series* (Charles E. Merrill).

TEACHERS The author reports that 11 teachers chose to be in the study and each chose the method of teaching he wished to use. Eight additional teachers were given no choice with regard to either being in

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the study or the teaching method. In general, the i.t.a. teachers were somewhat younger and less experienced than those in the other three groups.

EVALUATION INSTRUMENTS: Silent reading was measured by the Stanford Achievement Test, Primary II. In addition, the Reading Interest Inventory and the San Diego Pupil Attitude Inventory was used. Teachers recorded the number of books read independently (other than texts) by children during the month of February. Oral reading was measured with the Gilmore Oral Reading Test, Fry's Phonetically Regular Words Oral Reading Test, and the Gates Word Pronunciation Test. These oral reading tests were administered to a randomly selected sub-group of 156 children as was "the Written Language Measure" which was administered in April 1966. In this latter measure, children were read a story under controlled conditions and were required to write an ending for it.

In the first year of the study, the authors reported a number of attempts to balance the Hawthorne effect. During the second year, they report that they attempted to further reduce the Hawthorne effect by reducing the number of visits to the classroom. They also noted that there was a tendency for teachers to view their jobs more routinely during the second year of the study than was the case in the first year.

DURATION OF THE STUDY: Tests were given at the end of the second grade. The author notes that approximately 79% of the students had completed the transition before entering grade two. Approximately 7% of the students completed the transition in each of the first three months of the second grade.

RESULTS: It is difficult to summarize all of the results of this study in view of the fact that four different experimental groups were used, thus permitting a great many comparisons between these groups alone. In addition, data was analyzed separately by I.Q., sex, and socio-economic level. These analyses were repeated for the large number of evaluation instruments above, thus producing a complex array of findings. Most of the major results are summarized in the author's first four paragraphs in the "Conclusion" section of this report, which states:

"The second grade silent achievement test results were as follows: (1) for the low I.Q. level, while there were no statistically significant differences, Scott, Foresman averaged one-third of a grade level higher in Paragraph Meaning than each of the other three programs; (2) for high I.Q. level pupils, the Lippincott and i/t/a-Merrill pupils averaged about one-half grade level higher on Paragraph Meaning than did the Scott, Foresman pupils; (3) Lippincott generally appeared to have a consistent advantage for Word Study Skills, except when compared with i/t/a-Merrill for the high I.Q. level; and (4) for the average and high I.Q. levels the results for Spelling favored both Lippincott and i/t/a-Merrill.

"The grade two oral achievement results for the entire subsample were: (1) Lippincott and i/t/a-Merrill pupils scored significantly higher on the Fry and Gates Word Lists than Scott, Foresman and Phonics and Word Power pupils, and (2) differences among groups were not significant on the Gilmore Oral Reading Test.

"Other second grade achievement results were as follows: (1) for the entire subsample no significant differences among groups appeared for written language as measured in this study; (2) for the high socio-economic level pupils, Lippincott and i/t/a-Merrill averaged significantly higher than did Scott, Foresman and Phonics and Word Power in the areas of Word Meaning, Word Study Skills, and Spelling; (3) for the average socio-economic level pupils, the results generally favored the i/t/a-Merrill group compared to the other three programs except for Word Study Skills where both i/t/a-Merrill and Lippincott were significantly higher than Scott, Foresman; and (4) for low socio-economic level, the Lippincott pupils scored significantly higher on Word Study Skills than did each of the other three programs and in the same area are i/t/a-Merrill pupils achieved significantly higher than did pupils in the Phonics and Word Power program.

"Overall, the grade two reading interest results were: (1) Scott, Foresman averaged significantly lower than each of the other three groups on the San Diego Inventory of Reading Attitude; (2) Lippincott teachers gave their pupils significantly higher ratings on both Maturity of Choices and Eagerness to Read; (3) i/t/a-Merrill pupils read significantly fewer books (other than regular textbooks) than did pupils in each of the other three programs; (4) ten classes for the second year qualified as having better than average attitudes toward reading on the San Diego Inventory; and (5) a total of eleven grade two classes placed in the preceding category."

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REFERENCE: *Henning, J. & Hayenga, J. Evaluation of first grade reading achievement in i.t.a., programmed reading and Scott, Foresman programs - a preliminary report. Unpublished manuscript. St. Cloud Public Schools, St. Cloud, Minn., 1967.*

STUDENTS: A total of 449 first-grade students were used in the study. The basal T.O. group had 12 classes with a total of 311 children, the i.t.a. group 4 classes with 112 children, and there was a single class, using Programmed Instruction, with 26 children. The authors note, "No special method was used to assign students, except for the following: entering kindergarten students were asked to have their parents determine whether they would remain in the public schools through grade one. Those who knew their child would be moved into the parochial schools for grade 1 were not included in the i.t.a. group." Classes were found to be equivalent according to I.Q. and reading readiness, but there was apparently some difference between the groups in terms of socio-economic status as measured through father's occupation. The S.E.S. data presented in the report is difficult to interpret, particularly since the number of children in the Programmed Instruction group was relatively small. The authors report that, "...each occupation is not proportionately represented in each of the reading groups."

MATERIALS USED: The precise titles used are not presented in the report, but are identified as follows: i.t.a., Scott, Foresman (in conjunction with phono-visual); Webster Programmed (in conjunction with phono-visual).

TEACHERS: The authors report that it is not known how the teachers were assigned nor was any special effort made to control for the Hawthorne effect. They point to these factors as limitations in the study.

EVALUATION INSTRUMENT: The Gates Reading Test total score was used as the dependent variable measure.

DURATION OF THE STUDY: The final tests were administered at the end of first grade.

RESULTS: The i.t.a. group scored significantly higher than the basal reader group and the authors report, "...and it appears as though programmed reading is also superior, though this specific test has not been run as yet. i.t.a. also appears superior to programmed, but this, too, is yet to be tested statistically." A further analysis of the data was performed by comparing class means within the basal T.O. classes and within the i.t.a. classes. The authors report that there were significant differences among the class means of the basal groups, but not among the i.t.a. groups. They conclude, "The classes, or the teachers, were more equalized, at a higher level in the i.t.a. program."

"The authors further note, "As a means of giving some consideration to the teacher variable, it was felt that it would be meaningful to compare the four highest basal classes with the four i.t.a. classes. If a teacher's 'goodness' is considered in progress of class on test, we must consider that as a measure of the four best basal teachers with the four i.t.a. teachers. A t-test for significance of differences between these eight classes was run and the i.t.a. group was found to still be significantly superior to the basal group."

Further analysis of the data was performed to determine whether or not there was interaction by I.Q. or by sex. There appeared to be no interaction in either case. That is, high I.Q. subjects did better in all three groups than middle or low I.Q. groups, and girls did better in all three groups than boys. The authors note, however, that, "...boys in the i.t.a. do better than girls in the basal and programmed groups."

REFERENCE: *Herman, F.D. The Clearfield Area Schools i.t.a. study - 1964-1965. Unpublished manuscript, Clearfield Area Schools, Clearfield, Pa., July 15, 1965.*

STUDENTS: Of the 179 first-grade children in the Clearfield, Pa. area included in the study, 95 were in i.t.a. classes while 84 were in the T.O. control group. Students were matched for mean I.Q. level.

MATERIAL USED: The i.t.a. group used the *Early-to-Read* series (i/t/a Publications, Inc.). The reading materials for the control group were referred to as a "basal reading series supplemented with language arts experiences and supplementary reading from co-basal series."

TEACHERS: No description is available in the reference to indicate the comparability of teachers although the author reports that i.t.a. teachers attended a two-day training program.

EVALUATION INSTRUMENTS: The California Reading Test. In addition, teacher-determined instructional levels were used in the evaluation.

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DURATION OF THE STUDY: Evaluation instruments were administered in May of the academic school year. No data is presented indicating the percentage of students who had made the transition to T.O.

RESULTS: The i.t.a. group scored higher but not significantly so on the Comprehension and Vocabulary sub-tests as well as on the total reading score on the California Reading Test. According to the teacher-determined instructional levels, 89% of the i.t.a. group were at the second grade reading level or above while no students in the control group were rated as performing at this level.

In terms of subjective evaluation, especially with slow students, Herman notes "...there was a success factor evident that is not normally found in T.O. programs. These children readily worked in the materials and with the teacher. The attention span and work habits of the children were excellent. Many of the former seat work activities used by these teachers when using T.O. materials gave way to expressive work of a more mature nature..."

Rather than finding a classroom divided into three reading groups with approximately ⅓ of the class in each group, we were finding from 50-60% of the pupils performing in the first group, 25-30% in the middle group, and 10-20% in the slowest group. Careful evaluation of these groups indicated that they were progressing satisfactorily and that, in addition to mastering symbols and sounds, they were developing reading habits that enabled them to understand and interpret their reading experiences."

REFERENCE: *Jameson, M.C. An experimental study of the effects of the initial teaching alphabet on reading achievement in the primary grades, with emphasis on first grade. A report on a primary reading experiment, N.D.E.A. Title III No. S7591X.Unpublished manuscript, Waterford Township School System, Pontiac, Michigan, June 7, 1965.*

STUDENTS: The subjects of the study were 980 first-grade students. Final data is presented on 21 i.t.a. classes and 21 control classes. Some evaluation instruments were administered to randomly selected groups of 5 children from each class.

MATERIALS USED: Not identified in the report.

TEACHERS: Comparability of the 21 i.t.a. and 21 control group teachers is not indicated.

EVALUATION INSTRUMENTS: The Writing-Spelling Test, the Botell Reading Inventory, and a 22-word spelling test. The Writing-Spelling Test involved asking the children to write on the topic "What I do to have fun." Writing time permitted was 6 minutes. All instruments appeared to have been scored according to T.O. standards; however, this is not specifically stated in the report. One table is presented which shows scores on the Stanford Achievement Test. This table indicated that the i.t.a. version of the scale was used, and as a result, is not cited in this abstract.

DURATION OF THE STUDY: Tests were administered at the end of one academic year. At this point the author indicates that approximately 85% of the children had made the transition from i.t.a. to T.O.

RESULTS: Although average scores are presented for each of the evaluation instruments, statistical analysis was not attempted by the author. In addition, since sample size and the variability of scores was not indicated, the i.t.a. Foundation was not able to perform these analyses. General statistical results are presented in view of the fact that the number of students in the study was large and some sense of the magnitude of the difference may be estimated.

On the Writing-Spelling Tests the average number of words used by the i.t.a. group was 26.8 as compared with 17.6 for the control group. The average number of words spelled correctly revealed a much smaller difference, being 13.7 for the i.t.a. group and 11.6 for the control group. The author made special reference to the fact that there was no formal attempt to teach spelling to the i.t.a. groups.

Using random samples of approximately 100 children in each group, the i.t.a. group received a score of 67.2 on the Botell Reading Inventory as compared to 28.2 for the control group. Using the 22-word spelling test administered to all children, the i.t.a. classes spelled an average of 15.1 words correctly as compared to 11.2 for the control group.

The author also reports on the results of the i.t.a. group and three control groups at the end of grade 2. No data regarding their comparability are presented; however, for two groups each of i.t.a. and T.O. children who took the Gates Advanced Primary Reading Test, the i.t.a. children scored higher on both measures of Word Recognition and Paragraph Meaning than their T.O. controls. Testing of significance was not possible on the basis of data provided; however, comparing Word Recognition scores in one school, one i.t.a. class achieved a grade level score of 4 months above its T.O. control, while in the other school the i.t.a. class received a score of one year above its T.O. control. Data for Paragraph Meaning for

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these classes suggested a 5-month superiority for both i.t.a. groups over their controls. In still a third school, the Metropolitan Upper Primary Reading Test was administered to second-year students. Again, testing for the significance of differences was not possible from data provided in the reference. The i.t.a. group scored 6 months above its T.O. control in Word Recognition. A difference of three months in grade level was found for the Word Discrimination sub-test and an 8-month difference was found for the Reading Meaning sub-test. In each of these measures the i.t.a. group scored higher than the T.O.

REFERENCE: *Kidd, J.W., & Horn, C.J. **i.t.a. with E.M.R.** Unpublished manuscript. Special School District of St. Louis County, Missouri 1967.*

STUDENTS: This study was conducted with 38 educable mentally retarded children in St. Louis County, Missouri. Their chronological ages were from 6 to 12 and their I.Q.s ranged from 50 to 78. Fifteen children were in a T.O. control group and 23 in an i.t.a. group.

MATERIALS USED: Not indicated in report.

TEACHERS: The comparability of teachers is not identified in the report.

EVALUATION INSTRUMENTS: The Wide Range Achievement Test was used as the dependent variable measure in the study.

DURATION OF THE STUDY: Children were exposed to reading instruction for an 8-month period. No data is presented with regard to the percentage of children making the transition to T.O.

RESULTS: The authors report that there is a six-month gain on the Wide Range Achievement Test for both the i.t.a. and the T.O. groups. They continue, "However, when the two groups were tested in the Fall of 1965 after a summer of no instruction, the two groups appeared to behave somewhat differently." The authors then present the following tabular data:

Losses and Gains	*Controls*	*Experimentals*
-5 to -1	*6*	*2*
0 to+4	*7*	*10*
+5 to+9	*1*	*8*
+1.0 to+1.4	*1*	*2*
+1.5 to+1.9	*0*	*0*
+2.0 to+2.4	*0*	*1*
	15	*23*

They report that a chi square test of significance for this distribution falls short of significance at the 5% level. In view of the very small number of cases with maintained gains of greater than 1.0, the usual assumptions of chi square cannot be met when the data is arranged in this form. By collapsing the table, it is possible to meet the assumptions of this statistical test. Thus, 13 of the control group either experienced some loss or gain of no more than 4, while 12 children in the experimental group were in this category. Gains of 5 or more were found for 2 of the children in the control group, and 11 in the i.t.a. experimental group. With data arranged this way, the assumptions of chi square are met and the obtained value is 4.79 which is significant beyond the .05 level, indicating a higher proportion of i.t.a.-taught children maintaining their gains than was found for the T.O. control group.

The author's note that, "...teachers' observation of both more competency and more interest in reading and writing than expected are encouraging outcomes of this work."

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REFERENCE: *Mazurkiewicz, A.J. A comparison of i/t/a and T.O. reading achievement when methodology is controlled. In A. J. Mazurkiewicz (Ed.),* ***i.t.a. and the world of English,*** *Hempstead, N.Y.: i.t.a. Foundation, 1966. Pp. 289-292.*

Mazurkiewicz, A.J. I.T.A. and T.O. reading achievement when methodology is controlled. ***The Reading Teacher,*** *May 1966, 19, 8, 606-610.*

Mazurkiewicz, A.J. ***First grade reading using modified co-basal versus the initial teaching alphabet,*** *Bethlehem, Pa. Lehigh University, Office of Education Cooperative Research Project Number 2676, 1965.*

Mazurkiewicz, A.J. A comparison of i/t/a and T.O. reading achievement when methodology is controlled. ***Elementary English,*** *October 1966, XLIII, 6, 601-606, 669.*

STUDENTS: The sample consisted of 819 first-grade children in the Bethlehem, Pa. area. According to the author, the i.t.a. sample contained a substantially higher proportion of children from a low socio-economic status background and, as a result, some of the analyses were based on 11 8pairs of children matched in terms of I.Q., socio-economic status, sex, years experience in school, all coming from uni-lingual backgrounds. The average I.Q. for the matched groups was approximately 116.

MATERIALS USED: The *Early-to-Read* series (i/t/a Publications, Inc.) was used for the i.t.a. groups, supplemented by the *Downing Readers* (Initial Teaching Publishing Co., Ltd.) for children who appeared to be slow readers. The co-basal series used the *Alice and Jerry* books (Row-Petersen) while slower students in this group used the *ABC Language Series* (American Book Company). Both groups had supplementary readings in an appropriate alphabet and relatively structured opportunities for writing.

TEACHERS: All teachers in the i.t.a. group had at least one year's experience with i.t.a. i.t.a. and T.O. teachers were matched in terms of age and experience. Both groups attended workshops with suggestions on how to use their materials most effectively. Both groups were supervised at least once a week and had an opportunity to consult with members of the staff. Efforts to balance the Hawthorne effect for the T.O. teachers involved making a special effort to emphasize the experimental nature of the project, which suggested a feeling of competition without directly encouraging it, and encouraging visitors to the same degree as experienced in the experimental group. According to the author, not only the teachers but the children in the control groups were well aware of the experimental nature of the project and seemed to respond to the Hawthorne effect.

EVALUATION INSTRUMENTS: The Stanford Achievement Test Form X was the primary research instrument. The Gilmore Oral Reading Test, the Gates Word Pronunciation Test, the Karlsen Phonemic Word Test and The Phonetically Regular Words Test were administered to sub-samples.

DURATION OF THE STUDY: The study covered a period of 140 days. At the end of this period 54% of the i.t.a. children had made the transition to T.O.

RESULTS: Complete data was available for only 385 of the i.t.a. children and 345 of the T.O. control group. The only significant difference in the Stanford Achievement Test indicates that the T.O. control group received a significantly higher score on the Spelling sub-test of the Stanford Achievement Test. No significant differences were observed for Word Reading, Paragraph Meaning, Vocabulary or Word Study Skills. When the data was analyzed separately for the matched groups of 118 students, the advantage in spelling for the T.O. group was maintained but there was a significant difference in the Word Reading sub-test, with the i.t.a. group receiving higher scores. No significant differences were found between the groups for the sub-sample populations (N=35 in each group) on any of the measures of oral reading or word recognition.

REFERENCE: *Mazurkiewicz, A.J. i.t.a. and T.O. reading achievement when methodology is controlled - extended into second grade.* ***The Reading Teacher,*** *May 1967, 20, 8, 726-729.*

Mazurkiewicz, A.J. ***The Initial Teaching Alphabet in Reading Instruction.*** *Lehigh University and the Bethlehem Area Schools, Pennsylvania, February 1967.*

NOTE: *The study reported in the first reference was a continuation into the second grade of a research project abstracted above. The second reference represents a comprehensive final report of the complete evaluation-demonstration project conducted jointly by Lehigh University and the Bethlehem Area Schools under a grant from the Fund for the Advancement of Education.*

STUDENTS: Data is reported in the first reference for second grade performance levels of 794 children taught with the Initial Teaching Alphabet and 471 taught with T.O.

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MATERIALS USED: The specific materials used in second grade are not identified; however, in the second reference above, the author notes, "The curriculum was paced to individual rates of learning so that transition from i.t.a. to t.o. materials followed the developmental sequence. The movement of larger segments of the 1964-65 first grade group into higher reader levels was found to have accelerated the need for curriculum reform at the second grade level with implications for reform in subsequent years. Teachers were encouraged to depart from the basal reader program when children began to read or complete the 4.1 level materials. A movement into literary materials, to the use of such individualized reading procedures as *My Reading Design* or to other individualized reading procedures was encouraged to eliminate the necessity for moving constantly to higher reader levels."

TEACHERS: The specific characteristics of the teachers is not cited; however, the second reference above includes a brief note on the preparation of second grade teachers which says in part, "Difficulties encountered were typically those of teacher adjustment to the higher reading level achievements of the i.t.a. group and the advanced level of writing ability. The use of a specific cursive writing system was introduced with all second grades in February and publisher conducted workshops were established to add this element to the curriculum. No specific need for such a program, nor for timing the introduction of cursive writing was found."

EVALUATION INSTRUMENTS: Data is presented with regard to teacher determined instructional levels, the Stanford Achievement Test, the Gilmore Oral Reading Test, the Fry Phonetic Words Test, the Gates Word Pronunciation Test, and a writing sample.

DURATION OF THE STUDY: Data is presented for dependent variable scores obtained at the completion of the second grade. As of April, of the second grade, approximately 98% of the children had completed the transition to T.O.

RESULTS: Using teacher determined instructional levels for the total sample, the i.t.a. children were rated as higher. For example, 13% of the i.t.a. group was reading at a 4.1 level or higher while only 2% of the T.O. group was at this level. At a reader level of 2.1 or lower, this was achieved by approximately 12% of the i.t.a. group and 22% of the T.O. group. Using a matched subsample of 101 children from each group, approximately 16% of the i.t.a. group was reading at a 4.1 level or above, with 6% of the control group at this level. Approximately 5% of the i.t.a. children were at a 2.1 level or below in T.O. with approximately 15% of the control group at this level.

On the Stanford Achievement Test, no significant differences were found on any of the sub-tests when the total sample was used. When a matched group of 68 children from each group was used, the i.t.a. group was found to score significantly higher on Spelling and Language sub-tests. With a matched group of 33 children from each group, the i.t.a. group scored significantly higher on the Fry Phonetic Words Test, but there was no significant difference on either the Gates Word Pronunciation Test or the Gilmore Oral Reading Test sub-tests of Rate or Accuracy.

Data with regard to the writing samples is presented for matched groups of 68 children. The i.t.a. children scored significantly higher than the control group on number of running words and number of polysyllabic words. No significant difference was found on the number of words spelled correctly using T.O. standards.

REFERENCE: *McCracken, R.A. A two-year longitudinal study to determine the ability of first grade children to learn to read using the Early-to-Read i.t.a. program. (An interim report of the first year). In A. J. Mazurkiewicz (Ed.),* ***i.t.a. and the world of English,*** *Hempstead, N.Y.: i.t.a. Foundation, 1966. Pp. 79-90.*

STUDENTS: In this study, 61 first-grade children were randomly assigned to either an i.t.a. group (N=34) or a T.O. control group (N=26). Groups were found to be equal in terms of I.Q., letter recognition, and a "pre-reading measure." In addition to the T.O. control group, three existing T.O. classes were used as sub-controls in an attempt to control for the Hawthorne effect. These latter classes did not know they were part of a study while the first T.O. groups did.

MATERIALS USED: The i.t.a. group used the *Early-to-Read* series (i/t/a Publications, Inc.) along with a number of specially transliterated materials to supplement the limited number of books available at the time of the study. The control group used the Ginn basal reading series.

TEACHERS: The teachers for the i.t.a. and the T.O. group were assigned randomly. According to records kept by the teachers, i.t.a. groups spent more time in writing and arithmetic while the T.O. control spent more time directly involved in reading.

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EVALUATION INSTRUMENTS: Measures consisted of the Standard Reading Inventory and the Stanford Achievement Test

DURATION OF THE STUDY: This abstract deals with an interim report which is based on the results administered in May of the first academic year. No data is provided with regard to the number of students who failed to make the transition from i.t.a. to T.O. at the time the instruments were administered.

RESULTS: The i.t.a. group performed at a significantly higher level than either the control group or the sub-controls on the Standard Reading Inventory in terms of the number of words pronounced correctly. They also achieved significantly higher maximum and minimum instructional levels as determined by the Standard Reading Inventory. The i.t.a. group scored significantly higher than both the control group and sub-controls on the Word Reading sub-test of the Stanford Achievement Test. However, on Paragraph Meaning, Vocabulary, Spelling, Word Study and Arithmetic sub-tests, while the experimental group scored significantly higher than the sub-controls, they did not score significantly higher than the basic T.O. control group. The author also notes that the control group scored significantly higher than the sub-controls on these measures.

In recording the amount of time pupils spent working independently, no significant differences were found between the experimental group and any of the controls.

REFERENCE: *McCracken, R.A. A two year longitudinal study to determine the ability of first grade children to learn to read using the* ***Easy-to-Read*** *i/t/a program. Unpublished manuscript, Western Washington State College, Bellingham, Washington, 1967.*

STUDENTS: On a random basis, 34 children were assigned to an i.t.a. class and 26 to a control group. These groups were found to be equal in reading readiness, I.Q., and ability to recognize letters. As a sub-control, three first grade classes were chosen randomly. The sub-control was designed to serve as a control for the Hawthorne effect.

MATERIALS USED: The i.t.a. group used the *Early-to-Read* Series (i/t/a Publications). The control group used the *Ginn Basal Reading Series*.

TEACHERS: The two teachers involved were assigned respectively to the i.t.a. or T.O. class on a random basis.

EVALUATION INSTRUMENTS: The Standard Reading Inventory, the Gray Oral Reading Test, and the Stanford Achievement Test were used as the dependent variable measures.

DURATION OF THE STUDY: Data is presented at the end of the first and second year of instruction. The percentage of children completing the transition to T.O. is not presented.

RESULTS: The author reports that the control group spent somewhat more time in reading during the first year while more time was devoted to writing and arithmetic in the experimental group. He attributes this to differences in methods inherent in the *Early-to-Read* and the *Ginn Series*. When times for reading and writing were combined, the two groups were considered equal in terms of amount of relevant instruction.

At the end of the first year, no significant differences were found with either the Standard Reading Inventory or the total score of the Gray Oral Reading Test. The author reports that statistical analysis was not possible with data obtained from paragraph five of the Gray Test since too small a number of students reached this level. He does note, however, that fifteen students in the i.t.a. group achieved this level as compared with only two in the T.O. group, suggesting somewhat superior reading on the part of the i.t.a. group. At the end of the first year, the i.t.a. group scored significantly higher than the control group on the Word Recognition sub-test of the Stanford Achievement Test, but no significant differences were found on the other sub-tests. The main control group scored significantly higher than the sub-control group on all the SAT sub-tests.

At the end of the second year, the i.t.a. group scored significantly higher than the control group on the Arithmetic Concepts sub-test of the Stanford Achievement Test, but not higher on sub-tests related to reading skills. The i.t.a. group scored significantly higher than the sub-control groups on Word Meaning, Paragraph Meaning, Word Study Skills, Language, and Arithmetic Concepts. The control group did not score higher than the sub-control group on these measures. No significant difference was found between the experimental and control groups on the Gray Oral Reading Test at the end of second grade.

Using the Standard Reading Inventory, the i.t.a. group achieved the highest instructional level. The difference was significant in comparison with the sub-control group, but not the main control group. The only sub-test on which there was a significant difference between the i.t.a. group and the main control

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group was the Pronouncing Vocabulary in Isolation Test where the i.t.a. group scored significantly higher than the controls.

The author notes, "There is one difference on the testing between the i.t.a.-taught children and the control and sub-control group which was noted consistently throughout the two years which is not discernible from the test scores achieved. The i.t.a. children consistently attempted more paragraphs per story when reading from the Gray Oral Reading Test and from the Standard Reading Inventory even though they did not achieve better. They seemed to have developed a greater independence or greater tolerance of frustration. Another way to interpret this would be that they had not been taught to depend upon the teacher for assistance in decoding words."

The author also reports a sub-study added to the main study. First-grader teachers in the study again taught the first grade. In this case, however, students were not assigned randomly to the i.t.a. or control groups but rather, the judgment of the kindergarten teacher, (the normal practice in the school system involved) was used for the assignment of students to classes. At the end of the first grade, it was noted that the control group scored significantly higher than i.t.a. group on the Word Recognition sub-test of the Stanford Achievement Test (the reverse of the main study finding) and the control group also scored significantly higher in Spelling (there was no significant difference in the main study). The author interprets these latter findings in terms of the Hawthorne effect particularly on the control group teacher.

REFERENCE: *Montesi, R.L. The initial teaching alphabet experiment, September 1964 - June 1965. Unpublished manuscript, Simsbury Public Schools, Simsbury, Connecticut, August 1965.*

Montesi, R.L. The initial teaching alphabet experiment, research report No. 11. Unpublished manuscript, Simsbury Public Schools, Simsbury, Connecticut, August 1966.

SUBJECTS: The subjects were 242 first-grade students in the Simsbury, Connecticut area. Students in the i.t.a. and control groups were matched on age, I.Q. and reading readiness.

Note: This abstract deals with both of the references above. The second paper reports on the continued progress of children in the first program, and thus, represents a two-year study. In addition, it includes children who had started the program in September 1965 and one-year data is presented for this group. Subjects in the first group included 50 children using i.t.a. and 192 in the control group. Children were matched on age, I.Q. and reading readiness. Complete data at the end of the second year was available for 44 children in the i.t.a. group and 158 in the control group.The second sample included 101 children learning to read with i.t.a. and 107 in a T.O. control group. Complete data at the end of the first year was available for 97 i.t.a. children and 103 T.O. children. Once again, children were matched on age, reading readiness and I.Q. In both studies, children began their reading experience in the first grade.

MATERIALS USED: The i.t.a. group used the *Early-to-Read* series (i/t/a Publications, Inc.). The control group used the *Ginn Basic Readers* and the *Laidlaw Readers*. The 1966 manuscript did not list the materials used for the children in second grade, nor did it list the reading materials used by the second group of the first-grade children. The 1965 reference indicated that the i.t.a. group used the *Early-to-Read* series (i/t/a Publications Inc.), the control group used the *Ginn Basic Readers*, and the *Laidlaw Readers*. The 1965 reference indicated that the "plans" for grade two included using the Ginn Basic Reading series supplemented by the SRA Reading program and the Scott, Foresman individualized reading program. Spelling materials were to include the Webster spelling books plus individual spelling lists. The indication in this reference was that the experimental and control groups were to be treated in a similar fashion.

TEACHERS: Teachers volunteered for participation in the experiment. Those in the i.t.a. group attended a four-day workshop. All teachers were instructed to follow the usual patterns for teaching as closely as possible and to devote the usual amount of time to reading activities. No reference to comparability of teachers was made in the 1966 reference.

EVALUATION INSTRUMENTS: The 1965 reference indicated that instruments to be used included the Word Study Skills sub-test of the Standford Achievement Test, the Gates Primary and Advanced Reading Tests, the Simsbury Creative Writing Test and the Simsbury Spelling Test. The 1966 reference indicated that the children in the second-grade level would be administered the Word Recognition, Paragraph Comprehension, Word Study Skills and Spelling sub-tests of the Stanford Achievement Test, Primary Battery II. Children who had reached the completion of the first grade in this second level were administered the Primary I Battery of the Stanford Achievement Test, Form W and the Spache Diagnostic Reading Scales.

DURATION OF THE STUDY: The 1965 reference indicates that final measures were taken in April and

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May of the academic year. No data are available concerning the percentage of students making the transition from i.t.a. to T.O. The 1966 reference suggests that the study was completed in June of 1966 for both the first and second-year children. Again, no data are available indicating the percentage of students who had made the transition to T.O.

RESULTS The 1965 reference indicated that the i.t.a. group scored significantly higher than the control group on the Stanford Achievement sub-test of Word Study Skills. Students who had achieved a grade level of 3.5 on the Gates Primary Test took the Gates Advanced Test. In this sub-group of relatively "more able" students, the i.t.a. group scored significantly higher on the Word Recognition sub-test and the Spelling sub-test, while the control group scored significantly higher on the Paragraph Reading sub-test. For students whose overall grade level was lower than 3.5 on the Gates Primary Scale, the i.t.a. group scored significantly higher on the Word Recognition, Sentence Reading and Paragraph Reading sub-tests. The i.t.a. group also scored significantly higher on the Simsbury Spelling Test.

A writing sample was obtained for a sub-group of the population. This was scored by the Spache Readability Formula and by a creative writing index including relevance, sentence sense, sequence of ideas, uniqueness and length. On these measures of creative writing, the i.t.a. group scored significantly higher than the T.O. control group. Approximately 37% of the control group reached this criterion level as compared with 70% of the children in the i.t.a. group.

The 1966 reference presented data for both the first and second-grade children. The second-grade children in the i.t.a. group scored significantly higher on the Stanford Achievement Test sub-tests of Word Meaning, Word Study Skills and Spelling. No significant difference was found on the Paragraph Meaning sub-test. Children using i.t.a. in the first-grade sample scored significantly higher than the control group on the Word Reading sub-test of the Stanford Achievement Test. No significant difference was found for Paragraph Meaning, Word Study Skills or Spelling. The i.t.a. first-grade group scored significantly higher than the T.O. group in oral reading as measured by the Spache Diagnostic Reading Scales.

REFERENCE: *Monson, H. The i/t/a Key and the doors it unlocks. Unpublished manuscript, Enlarged City School District of Newburgh, Newburgh, N.Y., 1967.*

STUDENTS Over 900 children in the Newburgh, New York area were involved in the study. Slightly over 600 were in the T.O. control group, and over 300 were in the i.t.a. group. The number of students taking each of the dependent variable instruments varies. The author notes, "Classes are carefully paired in the 14 elementary schools of the district as to teachers, pupils, etc., so as to enable us to conduct a valid comparison of the value of i.t.a. as to all level of pupil activities." He also reports that i.t.a. and T.O. classes were comparable in reading readiness as measured by the Metropolitan Reading Readiness Test.

MATERIALS USED Not indicated in the report.

TEACHERS Except for the statement that the classes are generally comparable with regard to a number of variables including the teachers, the author does not report on their specific training or how they were selected for the study. In the Results section of his report, however, he notes that scores on a standardized measure of arithmetic were not significantly different between the i.t.a. and the T.O. groups, thus lending credence to the comparability of classes.

EVALUATION INSTRUMENTS Appropriate forms of the Stanford Achievement Tests were given at both the end of first grade and second grade. In addition, the Metropolitan Reading Test was administered to second-grade children.

DURATION OF THE STUDY As indicated above, tests were administered at the end of first grade and second grade. The author appears to state that 70% of the children had completed the transition in second grade, although it is not entirely clear whether he is referring to the first or second grades.

RESULTS The author reports that, at the end of first grade, the i.t.a. group scored significantly higher on all of the sub-tests of the Stanford Achievement Tests, including Word Reading, Paragraph Meaning, Vocabulary, Spelling, and Word Study Skills. No significant difference was found on the Arithmetic sub-test of this instrument. At the end of second grade, the i.t.a. group scored significantly higher than the T.O. control on both the Reading and Spelling sub-tests of the Metropolitan Reading Tests. The results for the Stanford Achievement Tests at the end of second grade indicated that the i.t.a. group scored significantly higher on both the Spelling and Word Study Skill sub-tests, but there was no significant difference in word meaning and paragraph meaning, science and social studies, language, or either of the arithmetic subscales dealing with computation and arithmetic concepts. In each of the above com-

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parisons, median values were tested for significance, which produced a relatively conservative statistical test.

The author also reports, "...Many of the teachers simply were not prepared for the superior skills of the i.t.a. pupils. In addition, they were faced with using or adapting instruction material - text books in particular - which were very inadequate for the level of reading and motivation of the majority of the i.t.a. pupils."

REFERENCE: *Myers, Nancy J. A comparison of the achievement of children using traditional orthography with that of children using the initial teaching alphabet in the Greater Johnstown School District, grade one. Unpublished masters thesis, Indiana State College, 1965.*

STUDENTS: The study involved 20 pairs of first-grade children matched on the basis of I.Q. and reading readiness. All children were tested at the beginning of the study and were ranked according to their I.Q. Using this rank order, the children in the odd rank positions were assigned to one group, those in the even rank position were assigned to the other. Minor changes were made in order to equate the two groups for reading readiness without disturbing the equivalence of mean I.Q. level.

MATERIALS USED: The i.t.a. group group used the *Early-to-Read* series (i/t/a Publications, Inc.). The T.O. control group used the *Scott, Foresman Sixties Edition*.

TEACHERS: Two teachers were involved who the author states were comparable in experience and formal education. The teacher of the i.t.a. group was the principal investigator of the study.

EVALUATION INSTRUMENT: The Gates Primary Reading Scale.

DURATION OF THE STUDY: Final tests were administered in May of the academic year. The number of the students who had made the transition to T.O. is not reported.

RESULTS: The i.t.a. group scored significantly higher on both the Word Recognition and Paragraph Reading Sub-tests of the Gates Primary Reading Scale.

The author also subjectively reports "...the children assumed work ordinarily done in second grade and were usually eager to do more...the program seemed to be a help to children with speech problems."

REFERENCE: *Regan, J.F. An experimental study of the effectiveness of the i.t.a. method of teaching reading in year one. Unpublished manuscript, North Syracuse Central Schools, North Syracuse, New York, 1965.*

NOTE: This abstract is based on preliminary evidence reported by Regan in a brief dittoed report. A more complex report is being prepared.

STUDENTS: The study included 418 children in first grade in the North Syracuse Schools. Of these 196 were in the i.t.a. group and 222 in the T.O. control group. Children were selected randomly for each group.

MATERIALS USED: Not Specified.

TEACHERS: According to the author "teachers of experimental and control group are of comparable quality."

EVALUATION INSTRUMENT: The Lee-Clark Primer and First Reader.

DURATION OF THE STUDY: One academic year.

RESULTS: The i.t.a. group scored significantly higher than the T.O. control group.

REFERENCE: *Regan, J.F., Regan, F.N., & Miller, R. A comparison of the achievement of students learning to read with the i.t.a. with students learning to read with traditional orthography - A second generation study - years one and two - longitudinal research. Unpublished manuscript, North Syracuse Central Schools, North Syracuse, New York, 1967.*

NOTE: This report is a follow-up study of the first year of experience cited above.

STUDENTS: Data was available for 354 children taught with i.t.a. for one year and a control group of 308 children selected randomly from the student population at large. Data for children who had been taught

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with i.t.a. for two years was available for 181 children compared with a control group of 147. *The children in the North Central Syracuse School system in the study were all in ungraded classes.*

MATERIALS USED: The i.t.a.-taught classes used the *Early-to-Read Series* (i/t/a Publications) while the control group used "Scott, Foresman and Ginn Materials."

TEACHERS: The authors report that the teachers were equated as closely as possible in experience and training and that all attended workshops and in-service courses in reading skills.

EVALUATION INSTRUMENTS: The Lee-Clark Readiness Test Primary and Advanced forms were used as measures of reading achievement at the end of first and second grades respectively.

DURATION OF THE STUDY: Data is presented at the end of one year of instruction for one group and at the end of two years of instruction for a second. The authors report that, at the end of the first year of instruction, between five and ten per cent of the children had failed to make the transition to T.O. They report that all the children had made the transition by the end of the second grade.

RESULTS: At the end of one year of instruction, the i.t.a. group scored significantly higher than the control group at the .001 level on the Lee-Clark Reading Test. The earlier study, reported above, found the difference significant at the .01 level at the end of the first year of instruction. Two notes in the present report are relevant here. The authors report that the T.O. group mean is the same as the one found in 1965-1966 classes and that "...this would indicate that the T.O. control group chosen is relatively stable and probably represents a good sample of first grade school population." They also note that, while no study of the difference between experienced and inexperienced i.t.a. teachers was conducted, the fact that, "...the difference was much greater between i.t.a. and T.O. groups in the second year the study was run may indicate that the teachers having had a years experience can do an even better job of teaching reading."

After two years of instruction with i.t.a., the authors report a difference significant at the .05 level on the Lee-Clark Reading Test with the i.t.a. children receiving higher scores. The authors note here, however, that, "One difficulty was...that the test used does not measure high enough grade level to test these children adequately. Since this test is intended to measure adequately from 1.5 to 2.5 and a large percentage of children scored 3.0 to 3.5 plus, the test did not measure the entire spread of scores for both groups."

Additional data presented include the percentage of children who had completed the first six levels of the ungraded curriculum. At the end of first grade, 20% of the i.t.a. group had failed to complete the program while 60% of the control group failed to meet the criteria. At the end of the second year of instruction, 5% of the i.t.a. group and 20% of the control group had failed to achieve this level.

The authors also report that the amount of written work done by the i.t.a. children is about double that of similar children in T.O. classes and, "Teachers reported that the quality was much higher than they had previously experienced with other classes of the same grade. The interest in reading and writing seems to continue into the second year." In addition, they note, "One of the factors in the creative writing of the i.t.a. groups is that the written vocabulary level is about 10 times as high as the T.O. groups." With regard to spelling, the authors note, "The teachers have not indicated any difference in spelling other than the child attempts to write more difficult words than he would normally write."

As a final note, the authors report, "There do not seem to be any important problems in the program. When a child in i.t.a. leaves the district, he is abruptly transitioned by the classroom teacher or the reading teacher by providing simple T.O. materials. This has not been a difficult task."

REFERENCE: ***Sandel, Lenore, Alpert, H., & Tanyzer, H.J. A comparison between the oral and written responses of first-grade children in i.t.a. and T.O. classes (U.S.O.E. No. 7-8220). In J.R. Block (Ed.), i.t.a. as a language arts medium. Hempstead, N.Y.: i.t.a. Foundation, 1968.***

PURPOSE: Study of the effects of i.t.a. upon children's language performances as measured through oral and written samples.

STUDENTS: A total of 96 children taught with the initial teaching alphabet and 101 taught with traditional orthography from first-grade classes in Nassau County, Long Island. Two classes (one i.t.a., and one T.O.) were selected randomly from each of four participating school systems.

MATERIALS USED: The authors do not identify the text materials used. However, in a number of other papers by the same authors using similar groups of children, i.t.a. classes used the *Early-to-Read* Series (i/t/a Publications, Inc.), supplemented with library books from English and American companies, while

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the T.O. classes typically used a variety of different methods including basal and multi-basal approaches, as dictated by the conventions in each participating school system.

TEACHERS: The authors note that teachers in each of the classes were considered comparable in competency as determined by the local school principal and all classes were all heterogeneously grouped.

EVALUATION INSTRUMENTS: According to the authors, "The data gathered included one oral response and one written response for each pupil in the study for each of three stimuli. The oral stimuli were administered by a research assistant on one-to-one basis with the pupil and the response was recorded on tape. Each writing stimulus was administered as a whole class activity. The written samples were gathered on three consecutive school days. Half of the children received the stimulus and responded in writing first then, later, were asked to make an oral response to the same stimulus. In the other half of the sample the oral response preceded the written response. Three stimuli were used in order to provide maximum opportunity for the youngster to react and respond on the basis of his experience and ability. The stimuli were designed to elicit (1) the child's description of a given object: 'How would you describe or tell about a car to a friend who never saw one?'; (2) the child's relating of a given experience: 'Tell me about a game you like to play.'; (3) the child's description of an emotional reaction to a given experience: 'The first day you went to school was a special day. Can you tell me how you felt that day?'" Each of the responses were scored in terms of number of running words, number of different words, and number of thought-units. A thought-unit was defined as a simple sentence or its equivalent.

DURATION OF THE STUDY: The authors do not indicate the point at which testing occurred during first grade, nor do they indicate the percentage of students who had made the transition to T.O. at the time of testing.

RESULTS: The authors report that data for the written sample indicated that the i.t.a. children wrote significantly more words, a significantly greater number of different words, and used a significantly greater number of thought-units than the T.O. control group. With the oral language measure, the i.t.a. children used a significantly greater number of different words and a greater number of thought-units than the T.O. children, but there was no significant difference between the groups in the number of running words. In general, the differences between the i.t.a. and T.O. children were much greater for written language samples than for the oral language samples.

When a separate analysis of the written data was performed controlling for oral language ability, the i.t.a. children still scored significantly higher on all three measures of written language than did the T.O. control group.

REFERENCE: *Shapiro, B.J., & Willford, R.E. i.t.a. - kindergarten or first grade? In J.R. Block (Ed.),* ***i.t.a. as a language arts medium.*** *Hempstead, N.Y.: i.t.a. Foundation, 1968.*

PURPOSE: A comparison of the relative effectiveness of beginning formal reading instruction in i.t.a. in kindergarten versus first grade.

STUDENTS: Final data was available for a total of 193 children who began formal reading instruction in i.t.a. in kindergarten and a control group of 185 who began formal reading instruction in i.t.a. in first grade. Children were generally from the Cleveland, Ohio area. i.t.a. and T.O. groups were approximately equal in I.Q. (mean I.Q. for each group: 110).

MATERIALS USED: All children used the *Early-to-Read* Series (i/t/a Publications, Inc.), supplemented with special materials prepared by the Educational Research Council of Greater Cleveland. After transition, children continued with the Scott, Foresman basal readers.

TEACHERS: All teachers attended three workshops and in-service training sessions. In addition, they received consultative help from staff members of the Educational Research Council of Greater Cleveland.

EVALUATION INSTRUMENTS: The Stanford Achievement Test Primary I and II.

DURATION OF THE STUDY: Data was collected at the end of both first and second grade. At the end of first grade, the authors report that eight per cent of the children who had begun formal reading instruction in first grade had completed the transition. Nine per cent of the group who began formal reading instruction in kindergarten completed the transition at the end of their first grade. The authors also report that, by the middle of the second grade, almost all children had completed the transition from i.t.a. to T.O.

RESULTS: The authors present data using the statistical technique of analysis of covariance controlling the

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factors of I.Q., teacher experience, and time spent in language arts activities. At the end of the first grade, children who began formal reading instruction in kindergarten scored significantly higher on the Stanford Achievement tests, sub-tests of Word Recognition, Paragraph Meaning, Spelling and Word Study Skills than children who began formal reading instruction in first grade. There was no significant difference between the two groups on the Vocabulary sub-test. At the end of second grade, children who began reading instruction in kindergarten scored significantly higher on all sub-tests of the Stanford Achievement test (including Vocabulary) than children who began their formal reading instruction in first grade.

REFERENCE: *Shohen, S.S. The effectiveness of teaching beginning reading with the initial teaching alphabet. Unpublished manuscript, Freeport Public Schools, Freeport, N.Y., January 1967.*

STUDENTS: Nine hundred twenty-three children in the Freeport, Long Island, School System were used in the study. Four hundred sixty-two children were in the T.O. group and 461 in the i.t.a. Groups were reported to be equal in terms of age, sex and racial distribution.

MATERIALS: The i.t.a. materials were not identified in the report. The author indicates that a variety of T.O. reading series was used as a function of the particular schools involved. These included those published by Harper & Row, Scott, Foresman; Holt, Rinehart & Winston; and Ginn.

TEACHERS: Teacher assignments by training were not discussed, although it appears that the i.t.a. teachers were more experienced than the T.O. teachers.

EVALUATION INSTRUMENT: The Stanford Achievement Test was used as the dependent variable measure.

DURATION OF THE STUDY: The dependent variable measure was administered at the end of the second grade. The author notes, "During first grade many children made a natural transition to traditional orthography (t.o.). By the end of the second grade, however, all children were reading t.o. either as a result of making the transition naturally, or in some cases, as a result of an arbitrary change-over by their teachers."

RESULTS: No significant differences were obtained in comparing the i.t.a. and T.O. children on the Stanford Achievement Test sub-tests of Paragraph Meaning, or Spelling.

The author reports the response of 46 teachers to the question, "Should Freeport continue the i.t.a. program next year?" Fifty percent of the group replied "yes," 41% "no," and 9% "undecided." He cites the major reasons for the recommendations to discontinue the program as: (1) over-dependency on "sounding out" approach to word recognition (2) sound discrimination difficult for "slow" learners, (3) poor fluency, children tend to read orally word by word, (4) basic reader stories beyond sophistication and concept development of first graders, (5) more problems created for transient children, (6) negative influence on T.O. spelling, (7) need to unlearn i.t.a. for T.O. The major reasons for continuing i.t.a. were: (1) consistency of medium, (2) more and better creative writing, (3) improved word attack skills, (4) more interesting stories in basic reader, (5) increased independent reading, (6) greater confidence.

REFERENCE: *Sloan, C.A. A comparative study of matched pairs, i.t.a.-T.O.- in beginning reading instruction. Unpublished manuscript, Board of Education of the Owatonna, Minnesota Public School System, Owatonna, Minn., 1966.*

STUDENTS: In this study 36 students were matched in terms of sex, I.Q., and reading readiness. Subjects were selected from 2 schools in Owatonna, Minnesota. Children began reading instruction in the second semester of the kindergarten year and continued through the first grade.

MATERIALS USED: Materials for the i.t.a. population were not identified. Superior and average children in the T.O. groups used reading materials published by Ginn and Company. The slower T.O. students used the *Getting Ready to Read* materials (Houghton-Mifflin).

TEACHERS: The author reports that teachers in the two groups were comparable, having had at least 5 years of teaching experience. All teachers received in-service training and "consultant service was made available most generously to both groups of teachers."

EVALUATION INSTRUMENTS: The Metropolitan Achievement Test.

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DURATION OF THE STUDY: The study covered approximately a 14-month period. No data is cited with regard to the percentage of students in the i.t.a. group who had made the transition at the end of this period.

RESULTS: The i.t.a. group scored significantly higher than its T.O. control in the Word Knowledge, Word Discrimination, and Reading Comprehension sub-tests. The author also observes that while the sample is small, there seemed to be a sex difference in favor of boys on each of the sub-tests.

REFERENCES: *Stewart, Rebecca. Two years with i.t.a. - an interim report of the Bethlehem-Lehigh research project. In A.J. Mazurkiewicz (Ed.),* ***i.t.a. and the world of English,*** *Hempstead, N.Y.: i.t.a. Foundation, 1966. Pp. 121-124.*

Stewart, Rebecca, i.t.a. - after two years. ***Elementary English,*** *November 1965, pp. 660-665.*

Mazurkiewicz, A.J. A comparison of i.t.a. and T.O. reading, writing, and spelling achievement when methodology is controlled. In A.J. Mazurkiewicz (Ed.), ***i.t.a. and the world of English,*** *Hempstead, N.Y.: i.t.a. Foundation, 1966. Pp. 59-65.*

STUDENTS: The initial groups consisted of over 450 children in the i.t.a. group and 875 in the T.O. control group. All children were from the Bethlehem, Pennsylvania area and all were involved in the i.t.a. program for two years. In view of the fact that the i.t.a. group had a higher proportion of lower socio-economic status children, matched groups of 196 children were used from some of the analyses. Groups were matched to within one point in I.Q., sex and socio-economic status.

MATERIALS USED: The i.t.a. groups used the *Early-to-Read* series (i/t/a Publications, Inc.). The T.O. control group received instruction in "a language arts centered co-basal reading program."

TEACHERS: Teachers for the two groups were considered comparable in terms of such factors as age and training and experience in teaching.

EVALUATION INSTRUMENTS: Several evaluation instruments were used including teacher determined instructional levels, the California Reading Test and a statistical analysis of writing samples.

DURATION OF THE STUDY: Most measures were obtained in May of the second year of reading instruction. At this point, approximately 95% of the i.t.a. group had made the transition to T.O.

RESULTS: At the end of the first year, teacher determined instructional levels indicated that almost 75% of the i.t.a. group was reading at the second grade level or above, while only 6% of the control group was reading at this level. At the same time, however, no significant difference was observed between the groups on the Upper or Lower Primary scales of the California Reading Test. When matched groups of 196 students were compared, however, the Vocabulary sub-scale of the Upper Primary California Reading Test showed a significant difference in favor of the i.t.a. reading group, while the Comprehension sub-test revealed no significant difference.

At the end of the second year, teacher determined instructional levels indicated that over 26% of the i.t.a. group were reading in T.O. at a reader level graded as 3-2 or higher, while no children in the control group were reading at this level. Using the total group for the California Reading Test no significant differences were obtained on either the Vocabulary or Comprehension measures, but the i.t.a. group scored significantly higher on the Stanford Achievement Test Spelling sub-test. When the matched groups of 196 students were used, the i.t.a. group scored significantly higher on the Vocabulary sub-test of the California Reading Test. No significant difference was found using the Comprehension sub-test. With the matched groups, the significantly higher score for the i.t.a. children on the Stanford Achievement Test Spelling sub-test was maintained.

In addition to these results, writing samples were obtained for a sub-sample of 144 of the matched-pairs group. These samples were analyzed according to a number of criteria. No significant differences were found between the groups in the use of correct punctuation. The T.O. group received a higher score on a measure of ability to use capitals than the i.t.a. group. The i.t.a. group received higher scores in terms of number of running words, number of polysyllabic words, and spelling.

In addition to the objective data, Stewart reports, "i.t.a...provided a learning environment which made observable differences in reading achievement; in independent learning; in motivation; in perseverance; in the ability to observe; and, in the ability to write."

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REFERENCES: *Tanyzer, H.J. Effectiveness of three different basal reading systems on first-grade reading achievement. In A.J. Mazurkiewicz (Ed.),* ***i.t.a. and the world of English,*** *Hempstead, N.Y.: i.t.a. Foundation, 1966. Pp.273-279.*

Tanyzer, H.J., & Alpert, H. Three different basal reading systems and first grade reading achievement. ***The Reading Teacher,*** *May, 1966, 19, 8, 636-642.*

Tanyzer, H.J., & Alpert, H. Effectiveness of three different basal reading systems on first grade reading achievement, Hempstead, N.Y.: Hofstra University, Cooperative Research Project No. 2720, 1965.

STUDENTS: Tanyzer used 643 first-grade students in three different Long Island Communities. Communities were considered approximately equal in terms of the intelligence levels of the first-grade population, mean family income, the entrance age to grade one, and the average reading achivement level at the end of grade one. Pre-tests of reading readiness of the children indicated that those in the community using the Lippincott series in T.O. scored considerably higher than either the i.t.a. group or the other T.O. control group.

MATERIALS USED: The i.t.a. group used the *Early-to-Read* series (i/t/a Publications, Inc.). The T.O. control group used the Scott, Foresman series and the third group used a phonetically-oriented approach published by Lippincott.

TEACHERS: Teachers volunteered to participate in the study within their own communities except in the case of the community using the phonically-oriented T.O. series where all first-grade classrooms were used. Each teacher attended a three-day workshop emphasizing the reading technique they were to use. They were observed throughout the study to insure that experimental procedures were being followed. Each teacher also kept a log of teaching experience. In general, these logs indicated the experience was quite comparable with the exception of the phonically-oriented approach in which the teachers spent somewhat less time in teaching reading than those teaching the other two groups. Teachers in the three groups were not completely comparable. The authors report that the teachers in the i.t.a. group tended to be younger, with less teaching experience than either of the two T.O. control groups.

EVALUATION INSTRUMENTS: The Stanford Achievement Test was the basic instrument. In addition, random sub-samples of children took the Gates Word Pronunciation Test, the Karlsen Phonemic Word Test, the Phonetically Regular Words Oral Reading Test and the Gilmore Oral Reading Test.

DURATION OF THE STUDY: Final measures of the study were taken after 140 days of instruction. At this point, approximately 60% of the i.t.a. group had made the transition to T.O.

RESULTS: Generally, the i.t.a. and the phonetically-oriented T.O. groups scored significantly higher in reading achievement measures than did the Scott, Foresman "eclectic" approach. The phonetically-oriented approach in T.O. produced significantly higher scores on both the Vocabulary and Spelling sub-tests than either the i.t.a. group or the other T.O. control group. Both the i.t.a. and the phonetically-oriented T.O. approach produced significantly higher scores on the word pronunciation tests. No significant difference was indicated in Reading Rate as measured by the Gilmore Oral Reading Scale, but the i.t.a. group scored significantly higher than the other groups on the Accuracy sub-test of this scale.

According to Tanyzer, a comparison of written compositions produced by the three groups indicated that i.t.a. children tended to write earlier in the school year and more frequently and easily than children in either of the T.O. programs. He notes, "The teachers using i.t.a. reported that their children produced more stories using a greater variety of sentence patterns and wrote more spontaneously than the children they had taught in previous years in a reading program using conventional orthography."

REFERENCE: *Tanyzer, H.J., Alpert, H., & Sandel, Lenore. Beginning reading - effectiveness of different media. Mineola, N.Y.: Nassau School Development Council, 1965.*

Note: *This is an abstract of a report of the results at the end of the first year of a study concerned with both kindergarten and first-grade children.*

STUDENTS: Students at each of the two academic levels (kindergarten and grade one) were randomly assigned to either T.O. or i.t.a. classes. Final data was available for 570 kindergarten children using i.t.a. and 435 first-grade children in the i.t.a. classes. The control group at the kindergarten level included 535 children and the first-grade group 406.

MATERIALS USED: All i.t.a. groups used the *Early-to-Read* series (i/t/a Publications, Inc.). The T.O. groups used a variety of techniques depending upon what was conventionally used in the school system. (Eleven

independent school systems were involved.)

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TEACHERS: All teachers attended a three-day workshop "designed to provide a theoretical basis and practical application of approved methods of teaching reading in T.O. and i.t.a." Teachers in the experimental and control groups were matched in terms of years teaching experience, level of formal training, and their principals' evaluation of their competence. All teachers volunteered for the study.

EVALUATION INSTRUMENT: The Stanford Achievement Test. In addition, parental attitudes and teacher attitudes were measured via a questionnaire.

DURATION OF THE STUDY: The study was designed as a two-year program for the kindergarten children, with the first-grade children providing data with regard to what might be expected with only one year of reading instruction. Results in this report are not presented separately for first-grade and kindergarten children and represent the administration of the final measure during May of the first academic year. According to the authors, only about 50% of the children had made the transition to T.O.

RESULTS: The results of this study were analyzed from a slightly different statistical base than most of the other results cited in this series of abstracts. In this case, children were not considered to be independent observations. As a result, total classes were used as the unit of observation. Despite this assumption, data from each class was used three times in each comparison since the results were analyzed for three I.Q. levels for each class. As a result, although the class was considered the independent unit, it was not consistently used as such in the analysis. Thus, although 2,000 children were used in this study, it was considered that the number of observations was actually 34 (17 i.t.a. classes and 17 controls). However, the picture is further complicated by using the data for each class three times, thus suggesting a base number of 102. It is difficult to say how these procedures may have affected the statistical analyses. However, the authors report that there were no significant differences between the i.t.a. and control groups on the Word Reading, Paragraph Meening, Vocabulary, and Word Study sub-tests of the Stanford Achievement Tests, although in most cases, for most I.Q. levels, the i.t.a. group scored somewhat higher than the T.O. control. For all I.Q. levels, the T.O. control groups scored significantly higher on the Spelling sub-test than the i.t.a. groups.

The data based on the teacher questionnaire involved a small number of cases. It indicated a fairly high general acceptance of i.t.a., but not without some reservations. The results from the questionnaire distributed to the parents were based on almost 100% of the i.t.a. groups and represented a very large number of observations. Typical items in the questionnaire included such items as, "Do you feel your child reads better than if he had been taught by a regular alphabet?" "Does the child pick up books voluntarily at home and derive pleasure from reading?" "Does he voluntarily write at home?" "Do you feel he has had a happy experience learning the i.t.a.?" and, "If you had a second child entering first grade and a choice of alphabets, would you want him to be in the i.t.a. class?" Between 80-90% of the parents endorsed each of these items.

REFERENCE: *Tanyzer, H.J., Alpert, H., and Sandel, Lenore.* ***Beginning Reading - The Effectiveness of i.t.a. and T.O.*** *Hofstra University, Hempstead, New York 1966.*

STUDENTS: One thousand two hundred eighty-eight children from 11 different school systems on Long Island were used in the study. Seven hundred eight children were taught with i.t.a. and a control group of 580 were taught in T.O. Of the 708 i.t.a. children, 410 began reading instruction in kindergarten and 298 began in first grade. Of the 580 T.O. children, 332 began reading instruction in kindergarten and 248 in first grade. i.t.a. and T.O. groups had the same sex distribution and were judged to be approximately equal in I.Q. and reading readiness through the use of standardized measures. The last two factors were statistically controlled through the use of analysis of co-variance. The socio-economic status of the children was judged to be approximately equal, but there was a slightly higher proportion of upper socio-economic status families included in the children who were studied for two years.

MATERIALS USED: The i.t.a. group used the *Early-to-Read* Series (i/t/a Publications, Inc.). In addition to this series, the authors report that approximately 75 British and American library books, plus a number of juvenile books transliterated by the Hofstra University staff, were used for supplemental reading. T.O. materials and methods varied according to the local school system preference, but represented the most popular series used in this country.

TEACHERS: All teachers for the study were volunteers who did not know whether or not they would be

assigned i.t.a. or T.O. groups. They were matched for number of years of teaching experience, level of training, and principals' evaluation of competence. While all teachers were assigned randomly to i.t.a. or T.O. classes, subsequent comparison showed slight differences such that teachers in the T.O. classes tended to be somewhat older and slightly more experienced than the i.t.a. teachers. All teachers were provided with 3-day workshops reinforcing the basic methods of teaching the particular medium they were to use in the study. Kindergarten teachers were instructed to follow normal reading readiness programs from September through January.

EVALUATION INSTRUMENTS. At the end of first grade, the Stanford Achievement Test Primary I was used; at the end of second grade, the Stanford Achievement Test Primary II. In addition, teacher determined instructional levels were used. Further, a questionnaire was distributed to parents, teachers, administrators, and supervisors.

DURATION OF THE STUDY. Kindergarten children were tested at the end of first grade. Additional tests were administered at the end of second grade. At the end of first grade, slightly over 50% of the children had made the transition to T.O. For the children tested at the end of the second grade, the authors report that almost all the children had completed the transition.

RESULTS. The attitude questionnaire distributed to the parents suggested very favorable attitudes toward i.t.a. Similar results were found for the teachers as well as for the administrators and supervisors.

With regard to teacher determined instructional levels at the end of second grade, 61% of the i.t.a. group were reading at a grade level of 2.2 or higher as compared with 29% of the T.O. group. Further, 39% were reading at a grade level of 3.1 or higher as compared with 11% of the control group. The authors also report that 5% of both groups were reading in the first half of the fourth grade level.

A large number of comparisons was made using the Stanford Achivement Test. In addition to the various sub-tests, the authors used a composite score of Word Recognition, Paragraph Meaning and Word Study Skills to provide a more reliable overall index of reading ability. In addition to this composite score, separate analyses were made for each sub-test.

In comparing children who were taught to read in kindergarten when tested at the end of first grade, i.t.a.-taught children scored significantly higher than the control group on the composite score. In addition, they scored higher in both Word Reading and Word Study Skills, but there was no significant difference for Paragraph Meaning. At the end of first grade, T.O.-taught children scored significantly higher than the i.t.a. group on the Spelling sub-test.

Using data at the end of first grade, i.t.a. children who began reading instruction in kindergarten were compared with those who began in first grade. Those who began in first grade scored significantly higher on the composite score of the SAT, but not higher on the individual sub-tests. Comparable comparisons were made for T.O.-taught children. Here again, it was found the children who began reading instruction in first grade in T.O. scored significantly higher at the end of first grade on the SAT composite score than children who began training in reading in T.O. at the kindergarten level.

Additional comparisons were made between children who received i.t.a. instruction in kindergarten versus children who were taught with T.O., but whose reading instruction began in the first grade. Here the composite SAT score was higher for the children in the T.O. group, although the word recognition sub-test was higher for the i.t.a-taught children. Once again, at the end of first grade Spelling sub-test scores were higher for the T.O. group. Still another comparison was made between children taught to read in kindergarten with T.O. versus children who began reading instruction in first grade using i.t.a. The Composite SAT score was highest for the i.t.a.-taught children as were the Word Recognition and Word Study Skills sub-tests. No significant difference was found in Paragraph Meaning. Again at the end of first year, the Spelling sub-test scores were higher for the T.O. control group. According to the authors, the data suggests that there is no particular advantage in starting reading instruction with either medium in kindergarten and, in fact, that there may be good reason not to do so.

The SAT Primary II tests were administered at the end of second grade when all children had been receiving reading instruction in the appropriate medium for two years. As noted earlier, almost all the i.t.a.-taught children had made the transition at the end of second grade. The authors report the composite score was significantly higher for the i.t.a.-taught children as were the sub-tests of Word Reading and Word Study Skills. Once again, no significant difference was found between the i.t.a. and T.O. control groups on the Paragraph Meaning sub-scale. At the end of second grade, however, the i.t.a.-taught children scored significantly higher on the Spelling sub-test than the T.O. group. The authors note that this is exactly the reverse of the finding at the end of first grade when the T.O. group scored significantly higher in Spelling.

In an attempt to investigate the relative effectiveness of i.t.a. for different I.Q. levels, children were divided into three equal groups according to I.Q. scores. Similar patterns of significant differences were

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found regardless of whether the children were in high, medium, or low I.Q. groups, and the authors conclude that, "...children instructed in the Initial Teaching Alphabet were significantly better in word recognition and word analysis at all levels of intelligence. Thus, it would not appear that intelligence should be a major determinant in deciding upon the medium of instruction for a child in beginning reading."

REFERENCE: *Tanyzer, H.J., Alpert H., & Sandel, Lenore. The effects of transition from i.t.a. to T.O. on reading and spelling achievement. In J.R. Block (Ed.), i.t.a. as a language arts medium. Hempstead, N.Y.: i.t.a. Foundation, 1968.*

PURPOSE: A study of factors associated with transition from i.t.a. to T.O.

STUDENTS: A total of 104 children in four classes selected randomly from schools in Nassau County, Long Island. All participating schools were using i.t.a. for the first time.

MATERIALS USED: All children in the study used the *Early-to-Read* Series (i/t/a Publications, Inc.), supplemented by approximately 75 library books from G.B. and the U.S.

TEACHERS: All teachers were experienced in the use of traditional orthography for teaching of beginning reading, but not in i.t.a. All attended a three-day workshop.

INSTRUMENTS USED: The Stanford Achievement Test represented the primary evaluation instrument. One-half of the group received the test printed in i.t.a. first, followed by the T.O. form of the same instrument. In the other half of the sample, the procedure was reversed with the T.O. form administered first. This procedure was used to control for the possibility of a practice effect involved in taking alternate forms of the same instrument.

DURATION OF THE STUDY: For purpose of the study, "transition" was defined as the point at which the children completed Book 7 of the *Early-to-Read* Series. The precise length of time for the study varied since the authors identified three different transition groups. The first group included those who had made the transition between May and June of 1965 (N=63). The second group included those children who made the transition between October and November of 1965 (N=16). The final group included those making the transition between January and March 1966 in second grade (N=25).

RESULTS: The authors report that, in general, high I.Q. students were the first to make the transition. When i.t.a. and T.O. versions of the same test were compared separately for each transition group, no significant difference was found for the sub-tests of Paragraph Meaning or Spelling. For the group making the transition first, the i.t.a. score was significantly higher on the Word Recognition and Word Study Skills sub-tests than the T.O. score. For the second group to make the transition, there was no significant difference in the i.t.a. versus the T.O. form for Word Recognition, but the children scored significantly higher on the T.O. forms on the sub-tests of Paragraph Meaning, Spelling and Word Study Skills than they did on the i.t.a. version of the same instrument. Finally, the slowest group to make the transition showed no significant difference between scores on the i.t.a. and T.O. forms of the same instrument for the sub-tests of Paragraph Meaning, Spelling and Word Recognition, but their i.t.a scores were significantly higher than their T.O. scores for the Word Study Skills sub-test. Combining all three transition groups, it was found that there was no significant difference in either Spelling or Word Recognition when i.t.a. and T.O. scores on the same instrument were compared. However, there was a significant difference in scores on the Word Study Skills sub-test with i.t.a. scores higher than T.O. scores, and a significant difference on the Paragraph Meaning sub-test with T.O. test scores being higher than i.t.a. test scores.

The authors conclude, "The results suggest that children who spend a longer time in the i.t.a. program and thus transfer at a later time, are just as successful in making the transition as children who make an early transition in first grade..."

REFERENCE: *Wapner, I. The initial teaching alphabet in a non-experimental setting: a preliminary report. Unpublished manuscript, Lompoc Unified School District, Lompoc, Calif., 1967.*

STUDENTS: Parents of children entering first grade in the Lompoc California School System were canvassed and given an option of placing their children in an i.t.a. program to begin in the Fall. The program had been used on an experimental basis in the community in two classrooms during the previous year. Fifty-one percent of the parents indicated they wanted their children in the i.t.a. classes. Almost

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1,300 students participated in the study. Final data is presented for 665 children in the T.O. control group and 347 children in the i.t.a. group (see evaluation instruments below).

MATERIALS USED: Not identified.

TEACHERS: The nature of training of the teachers and their assignment to classes is not specified in the paper.

EVALUATION INSTRUMENTS: The author reports that the State Legislature in California has "mandated the use of a single instrument throughtout the state." This study used "A State published edition of Stanford Achievement Test, Primary Form I. This edition contained only test sections related to reading." The procedure for the administration of the tests in this study was somewhat unusual. The author reports that a random sample of one-half of the i.t.a. group was administered the Stanford Achievement Test in T.O., while the other half was administered the same instrument in i.t.a. Ten days later the procedure was reversed; i.e., the group receiving the test in T.O. took the same form in i.t.a., the group receiving the test in i.t.a. took the T.O. version first. Final data in the paper reported in this abstract is based only on those who took the T.O. version first. Thus, there is reduction in sample size from over 600 i.t.a. children to only 347 the author noted, "We have found that children who took the i.t.a. transliteration first performed significantly better on the T.O. version ten days later." Final criteria data is not reported for this group.

DURATION OF THE STUDY: The report deals with testing at the end of the first grade. No data is presented with regard to the percentage of i.t.a. children who had made the transition to T.O.

RESULTS: The author reports that the i.t.a. group performed significantly higher than the T.O. control group on all of the sub-tests used. This included Word Meaning, Paragraph Meaning, Total Reading (a summary of the first two sub-tests), Vocabulary, and Word Study Skills.

REFERENCE: ***Willford, R.E., & Shapiro, B.J. The effect of three different methods of transition on tested reading achievement. In J.R. Block (Ed.), i.t.a. as a language arts medium. Hempstead, N.Y.: i.t.a. Foundation, 1968.***

PURPOSE: A study of three different methods of achieving transition from i.t.a. to T.O.

STUDENTS: Twelve classes of first-grade children participated in the study on a voluntary basis. Each was randomly assigned to one of three different methods of transition. The criteria for inclusion in the study included the fact that none of the children in the class had made the transition to T.O. prior to the study; that none of the children were beyond that point in Book 6 of the *Early-to-Read* Series (i/t/a Publications, Inc.) where the transition training begins, and, that none of the children had been exposed to any form of formal transition instruction.

MATERIALS USED: One of the three transition groups used the *Early-to-Read* Series (i/t/a Publications, Inc.) and continued with it through Book 7. The second control group used the same reader series, supplemented by the *i.t.a. Language Arts Transition Program* (Educational Research Council of Greater Cleveland) which is described by the authors as including 85 instructional units. The authors do not indicate the point at which this group abandoned the *Early-to-Read* Series, although it appears that the Language Arts Transitional materials were introduced after Book 5 of the *Early-to-Read* Series. The third group also used the *Early-to-Read* Series and abandoned it at the end of Book 5, thus making what the authors refer to as an "abrupt transition." This latter procedure is comparable to the most common practice in Great Britain (i.e., no formal transition instruction).

TEACHERS: Teachers attended an in-service workshop for purposes of explanation of the particular program of transition they were to follow. No other data with regard to the comparability of teachers is presented.

EVALUATION INSTRUMENTS: The Stanford Achievement Test Primary II was the major evaluation instrument used. Three different forms were presented in T.O. Form W was administered in September 1966 before transition occurred. Form Y was administered in January 1967 when most of the children had completed Book 7 of the *Early-to-Read* Series. Form X was administered in March of 1967 when most of the children had completed the *i.t.a. Language Arts Transitional Program*. All three forms were administered to all three groups of students.

DURATION OF THE STUDY: Final testing occurred in March 1967, or approximately halfway through the second year of formal reading instruction.

RESULTS: Results are analyzed using analysis of co-variance controlling for the i.t.a. reading level as measured in September 1966. Computations are based upon data collected in the final testing period (March 1967) after all groups had completed transition. According to the authors, the group using the *i.t.a. Language Arts Transitional Program* scored significantly higher than each of the other groups on sub-tests measuring Word Meaning, Spelling, Word Study Skills, and Language, (with the single exception of the fact that the group using the abrupt transition approach did not score significantly different from the language arts transition group in Spelling).

In general, there were no significant differences between the other groups, with the single exception of the fact that the group using the complete *Early-to-Read* series did score significantly higher than the group abandoning the series at the end of Book 5 on the Language sub-test.

No statistical analysis is presented for the data obtained in January 1967 when the group using the total *Early-to-Read* Series completed its series, but the Language Arts Transition group had not. At this time, however, the data indicates that the *i.t.a. Language Arts Transition Program* group scored higher on all of the measures than either of the other two groups.

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